

Factors That Impact Two-Year College Attendance and Program Enrollment
among Community College Students

by

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Abstract

Research suggests that numerous factors affect community college attendance. Therefore, when students choose to attend community college, those factors often are key aspects of their decisions. Nonetheless, limited information exists that identifies which particular traits affect community college choice and how the background characteristics of students impact those qualities. Hence, this study evaluates how well academic and institutional factors as well as the character traits of students influence the decision to attend community college.

The purpose of this study was to conduct a path analysis assessment of the academic and institutional factors that impact community college attendance and program enrollment. Data were collected from the 2005 Freshman Survey administered by the Cooperative Institutional Research Program (CIRP). Path analysis modeling was used to analyze these data to determine which academic and institutional factors influence community college choice and to see how background characteristics moderate those traits.

The results of this study yielded several positive correlations and, therefore, indicated significant relationships between community colleges and academic, institutional, and background characteristics and their ability to successfully predict community college attendance. This study also revealed that both academic and institutional factors affect community college attendance. However, it was evident that regression models with certain academic factors predicted community college attendance more accurately, where models with institutional factors possessed more statistically significant factors. Further, this study revealed that background character traits did not affect community college choice as much as previously assumed. Hence, the ability to predict community college attendance should be enhanced as a result of the findings of this study.

Dedication

I would like to dedicate my doctoral dissertation to my family and friends who have shown so much support and faith in me throughout this entire process. In particular, I would like to thank my late grandmother and my grandfather for instilling in me the desire to succeed and never quit. Most of all, I would like to thank God for giving me the fortitude to endure this task and for making this accomplishment possible.

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Chapter 1

Introduction

People attend community college for a number of reasons. Some people attend community college to move upward within society, to improve their job skills, and to improve their basic academic skills (Vaughn, 1982). Other students attend community college for cultural enhancement, to become better citizens, or, simply, to take continuing education courses for personal growth and development (Santos, 2004). Considering this, students' choices to attend community college can be grouped into two major categories: *academic factors* and *institutional factors*. These factors are often moderated by *background characteristics*, such as family history, socioeconomic status (SES), and racial and ethnic background.

Academic and institutional factors may have differentiated effects when it comes to community college attendance. For instance, when considering the academic factors that influence community college choice, students who are low-achievers in high school may attend community college for totally different reasons than students who are high achievers (Byrd & MacDonald, 2005; Grimes & David, 1999). Low-achievers may not be academically-prepared to attend a university; therefore, they take advantage of the open access policies of two-year colleges and attend community college to take remedial courses, to enroll in vocational and technical courses, or to use community college as an ends toward a terminal education (Maxwell et al., 2003; Vaughn, 1982). On the other hand, college ready students may attend community college to take advantage of low tuition costs, to give them time to decide on a particular career

path, or to use community college as a conduit to transfer to a four-year institution (Lanaan, 2003).

Institutional factors that influence community college choice are related to the faculty and administration of a community college, the special programs and services offered there, and the environmental climate of the institution (Engstrom & Tinto, 2008; Goble, Rosenbaum, & Stephan, 2008; Kisker & Oulcalt, 2005). Not only are these aspects of community colleges important to the college choice of students, but they also can help influence the decisions they make after enrollment (Maxwell & Shammass, 2007; Rifkin & McKinney, 1996; Townsend, 2007). For the most part, students choose institutions that best suit their needs and offer them the support needed for them to achieve their goal.

In the literature, background characteristics relevant to the college decision-making process of community college students are: academic histories of family members, socioeconomic status (SES), tuition affordability, family history, parental engagement, and racial and ethnic background characteristics (Astin, 1975; Bers & Galowich, 2002; Francis & Morning, 1993; Lee et al., 2004; Pike & Kuh, 2005; Terenzini et al., 1996; Usher, 2004; Warburton, Bugarin, & Nuñez, 2001). These characteristics are important to the decisions students make relative to community college choice because they set a precedent for students by serving as antecedents that influence their institutional selection. For instance, students who are the first to pursue a post-secondary education, generally, do so without the knowledge and understanding required to choose a suitable institution (Drolet, 2005; Nomi, 2005). They also do so without a clear understanding of the academic and social expectations required of them and without truly knowing how to access the resources needed to help them navigate thru the college system. Among these factors, SES, family history, and race and ethnicity play extremely important roles.

SES plays a major role in college choice for students from low-income backgrounds, because they, generally, lack the sophistication required to facilitate the enrollment process at four-year institutions (Astin, 1975; Bers & Galowich, 2002). More than that, the low-tuition rates of community college attracts students with limited financial resources (Rifkin & McKinney, 1996; Townsend, 2007). Not only are the low tuition costs attractive to students from meager backgrounds, but their family obligations and parental involvement also are important factors in their selection process (Choy et al., 2000; McDonough, 1997). For instance, non-traditional students, usually, have to work, take care of a family, and study at the same time. Because of these restraints on their time, they elect to attend community colleges rather than four-year institutions due to their close proximity and the on-campus childcare they offer.

Additionally, the parents of community college students play a significant role in their decision process as well. Parents who have acquired a post-secondary education, generally, encourage their child to attend a four-year institution, while students whose parents have not pursued education beyond the secondary level often are not involved in their child's decision to pursue a postsecondary education (Bers, 2005; Coleman, 1988; Lee et al., 2004; Willette, 1989). Further, the probability of not attending a community college is higher for students whose parents help them prepare for college early on (Bers & Galowich, 2002). There also is research that suggests that student success for minority students can be predicted by parental and family associations (Herndon, & Hirt, 2004).

Race and ethnicity is another factor that affects college choice among community college students (Cofer & Somers, 2001; Maxwell & Shammass, 2004; Santos, 2004). For the most part, minority students are less likely to attend a four-year college compared to Whites (Rendon, 1993; Person & Rosenbaum, 2006; Pope, 2002). As well, minority students, generally, are low-

achievers compared to their non-minority counterparts and, for the most, are not prepared to pursue a bachelor's degree (Harnish & Lynch, 2005; Hoffman, 2003). Usually, minority students do not take the examinations required to enter into a four-year institution; therefore, they choose to attend a community college instead (Hebert, 2001). Considering this, the probability of minority students attending community college is higher than the likelihood of them attending a four-year institution.

Listed above are only a few of the reasons people decide to attend a two-year college rather than a four-year institution. The academic factors, institutional factors, and background characteristics presented here barely touch the surface of this issue. As has been the trend of the past, most of the research concerning college choice has focused, primarily, on four-year institutions instead of two-year colleges. For this reason, considerably more research is required in this area in regard to community colleges.

Conceptual Framework

Efforts to understand the reasons why students decide to attend community college in terms of academic factors, institutional factors, and background characteristics of students can greatly improve the recruitment efforts of two-year institutions, especially when those efforts attend to differences among racial and ethnic groups. The reasons students attend community college in regards to the groupings above also can help educators better understand why certain groups of students choose to attend two-year colleges over four-year institutions. Further, understanding the reasons why students elect to attend two-year institutions could increase the number of qualified students who attend community college as well as help identify students to attend community college who otherwise would not continue their education beyond the secondary level. Even more, examining the reasons students attend community college could

help increase student persistence and graduation rates within two-year institutions. Most importantly, the information gathered from studying college choice among community college students can help teachers, counselors, school administrators, academic advisors, as well as academic and personal development program staff members and administrators better serve the students of their schools and programs simply because they would have better insight into the ways students view postsecondary education.

Past research on the decision-making process students employ when selecting a college also have been grounded in economic and sociological theoretical frameworks (Hearn, 1984; Jackson, 1978; Tierney, 1983). As a result, three basic approaches have been developed from these frameworks: economic, status-attainment, and a combination of the two. The economic model focuses on the cost-benefit analyses of college choice. The status-attainment model considers social and personal characteristics of students as well as utilitarian motivators in regard to educational and occupational aspirations; however, student aspirations are the key factor of this process (Jackson, 1982). The combined model incorporates components from both models in three distinct phases that first consider student aspirations, then economic feasibility, and finally, an evaluation of the remaining options (Litten, 1982). However, these college choice models are limited when one considers the fact that students may choose to attend college for reasons other than economic and status-attainment issues.

Somers, Haines, Keene, Bauer, Pffeifer, McCluskey, et al. (2006) developed a model that consists of a variety of factors, including student background characteristics, educational and occupational aspirations, educational achievement, social environments, financial variables, net cost, institutional climate, and institutional characteristics primarily to study community college choice. Former models were used to examine students choosing a four-year college or university.

The model developed by Somers et al. (2006) was tested using focus groups of community college students only.

Considering this, the conceptual model proposed for the current study will be the Academic, Institutional, and Background Student Choice (AIBSC) Path Analysis Model. The AIBSC path analysis model is a recursive, correlational model that contains aspects of the model used by Somers et al. (2006). However, it draws mostly from the elements Pike and Kuh (2005) used in their conceptual model in their study concerning the relationship between the background characteristics, college experiences, and learning outcomes of first- and second-generation college students. This study will show the connections of Pike and Kuh's model in terms of the relationships that exist between the background characteristics of students and the influences that various academic and institutional factors have on a student's decision to attend community college. Pike and Kuh drew on aspects of Astin's (1970) student outputs, student inputs, and the college environment and Pascarella's (2000) conceptual model relative to the influence that the college environment has on student outcomes. The AIBSC model (Figure 1) below shows the connections between the students' postsecondary options, academic factors, institutional factors, background characteristics, and community college choice.

Drawing on Pascarella's (2000) model of environmental influences on college outcomes, the AIBSC model includes constructs (variables) that represent the perceptions of students relative to their own environments (at macro- and micro-levels) and the perception of their experiences within surrounding settings according to academic factors, institutional factors, and background characteristics. In this model, prior experiences of community college students affect their decision to attend a two-year college and subsequent decisions thereafter. This means students' postsecondary options, academic factors, institutional factors, and background

characteristics relative to their interactions with each other may have an indirect affect on student college choice.

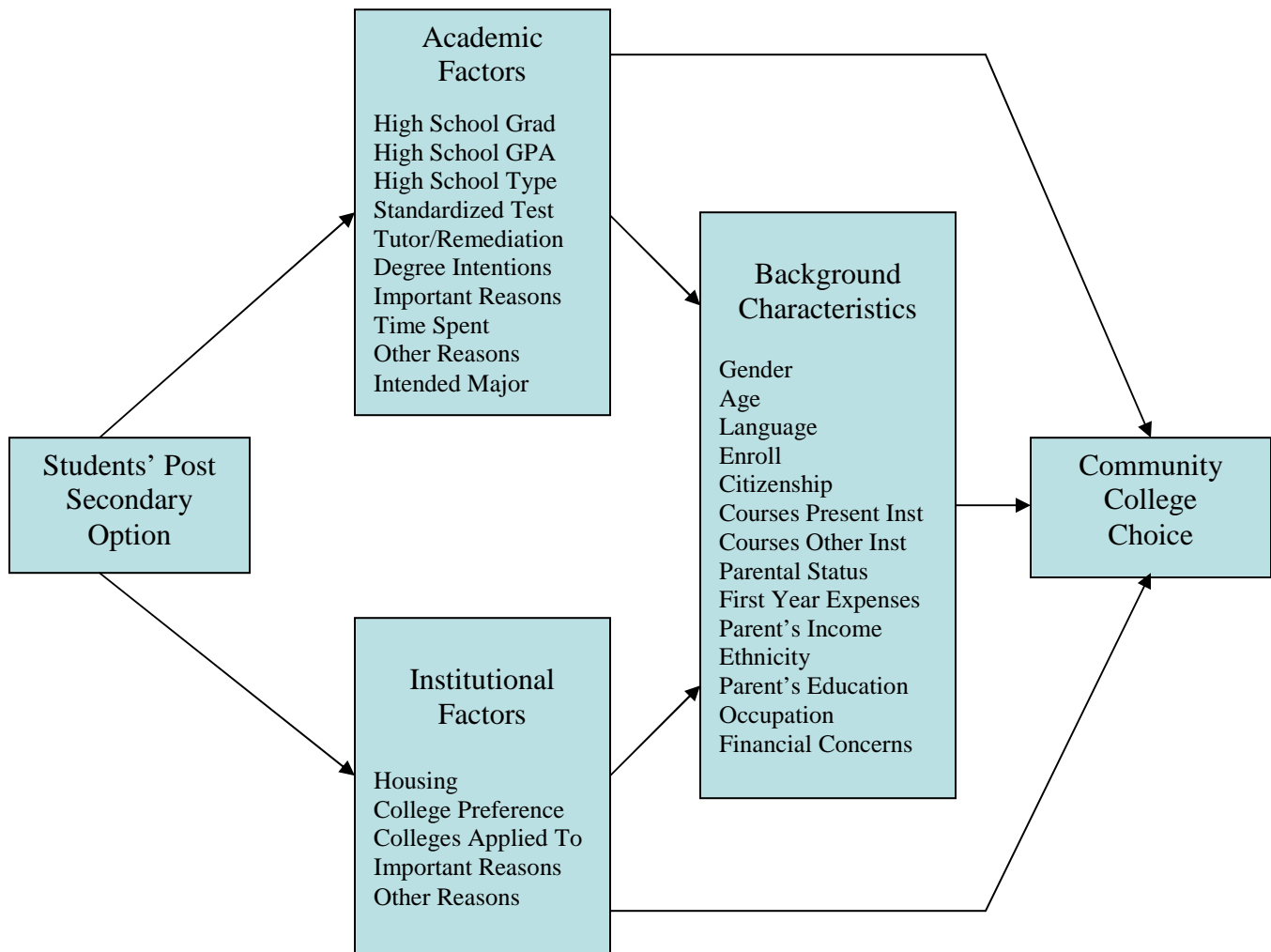


FIG. 1 Academic, Institutional, and Background Student Choice (AIBSC) Path Analysis Model

The AIBSC path analysis model, which includes students' postsecondary option to attend a two-year or four-year institution, focuses on three important aspects that affect school choice among college students: academic factors, institutional factors, and background characteristics. As applied to this study, this model provides a useful guide for understanding how specific academic factors can influence or explain the educational aspirations and institutional choice of

community college students. Further, this model presumes that institutional factors also have positive associations with the educational aspirations and college choice of students. Finally, this model can support or disprove the body of research that suggests that certain social background characteristics serve as possible influences that affect student judgments relative to college choice and the decisions students make after college enrollment.

Testing community college choice through the AIBSC model will add to the body of community college choice research in the sense that, first, it will look beyond the cost-benefit analyses of the economic model and student aspirations and utilitarian nature of status-attainment models by considering other factors that possibly influence college choice such as the academic ability and the background characteristics of students. Further, it will extend Pike and Kuh's (2005) model, which examined the effects that student background characteristics and college experience have on learning outcomes, by considering the impact that precollege experiences have on the college decision-making process. As well, it will broaden Astin's (1970) and Pascarella's (2000) models, which also considered the post-enrollment effects of student inputs and college environments and experiences on student outputs.

The current model uses aspects of former models, but unlike Astin (1970), Pascarella (2000), and Pike and Kuh (2005), it focuses on academic, institutional, and background factors that lead to the decision to attend community college instead of focusing on the outcomes of students after they have been admitted and enrolled into a postsecondary institution. The AIBSC model also will expand the model developed by Somers et al. (2006) by not only considering the general trends uncovered within the data set, but also will advance their model by considering the correlational interactions that exist between the variables included in this model. Doing so,

may lead to more specific reasons as to why students attend community college and lead to more efficient student advisement and guidance practices.

Statement of the Problem

Researchers have investigated various factors related to students electing to attend community colleges (Christie & Hutcheson 2003; Lee et al., 2004; Townsend, 2007). However, specific studies about students' motivation relative to community college choice are quite limited (Cofer & Somers, 2001; Grimes & David, 1999; Inman & Mayes, 1999; Pope, 2002; Santos, 2004). Examining this phenomenon can further increase the awareness of educators as to why students attend two-year colleges and lead to more efficient recruitment efforts as well as student persistence and graduation rates for community colleges.

Purpose of the Study

Purpose Statement:

The purpose of this study is to investigate how academic and institutional factors influence students' choices to attend a two-year college and examine how background characteristics moderate these factors.

Research Questions:

The following questions will guide the process of inquiry:

1. Nationally, what academic and/or institutional factors influence students' choices to attend a two-year college?
2. Nationally, how, if at all, do background characteristics moderate academic and/or institutional factors among community college choice?

Definitions of Terms

The following definitions will be used for the purposes of this study:

- *Academic factors* – elements such as pre-college preparation, degree aspirations, and teacher/student engagement among others that influence the decision students make relative to choosing a college.
- *Academic preparation* – refers to the precollege academic skills and abilities acquired by students in regard to them attending a post-secondary institution.
- *Academic remediation* – refers to the assistance students receive to improve their academic performance in math, reading, and English.
- *Academic (or student) success* – refers to the academic achievement of a student.
- *Background Characteristics* – aspects like parental involvement, family and peer associations, parental education, and socioeconomic status (SES) as well as other socially-related elements that influence the decision students make relative to choosing a college.
- *Chain migration* – refers to the influence of social networks on immigration patterns relative to college attendance (Person & Rosenbaum, 2006).
- *College environment* – aspects of a post-secondary institution that may affect the student (Astin, 1970).
- *Community college choice* – refers to the decision students make relative to attending a community college.
- *Community colleges* – are comprehensive institutions that offer general, liberal, career, vocational, adult, and continuing educational opportunities (Education Encyclopedia–StateUniversity.com, 2009).

- *Degree aspirations* – refers to the educational goals of a student relative to their pursuit towards a college degree.
- *Ethnic enclaves* – refers to the distinct social boundaries of a racial or ethnic group that exist within the community college environment (Person & Rosenbaum, 2006).
- *Family history* – refers to past familial experiences that affect the perceptions of students and influence their decisions.
- *First-generation college students* – refers to students who have parents who have not received a degree from a post-secondary institution.
- *Institutional characteristics* – refers to elements of a college such as faculty and staff influences, special programs and other initiatives, and institutional climate and other characteristics that gives it its identity.
- *Institutional climate* – refers to the environmental conditions of a post-secondary institution.
- *Institutional factors* – elements such as institutional climate, faculty and administrative staff demographics, specialized programs and initiatives offered by the institution, and institution size and location that influence the decision students make relative to choosing a college.
- *Integration* – the combined effects of student characteristics, academic factors, and background characteristics – not in any particular sequence or at a certain degree of magnitude – in regard to their affect on community college choice.
- *Junior colleges* – are institutions that offer a general and liberal education with the intent of preparing its students to transfer and complete a baccalaureate degree (Education Encyclopedia–StateUniversity.com, 2009).

- *Open-enrollment* – an enrollment policy that allows students from any academic or social background to enroll in a community college of their choice.
- *Peer associations* – relationships and associations that students have with their peers prior to college.
- *Precollege characteristics* – aspects of a student possessed prior to college.
- *Second-generation college students* – refers to students who have at least one parent who attended college and received a degree.
- *Special programs/special programming* – refers to the specialized programs that community colleges offer such honors programs, mentoring programs, learning communities, among others.
- *Social integration* – refers to the degree that students successfully assimilate into the college environment.
- *Student inputs* – various aspects a student brings to college that potentially lead to personal growth and learning (Astin, 1970).
- *Students of color* – students whose racial or ethnic background is anything other than White (used synonymously with minorities).
- *Student outputs* – aspects of student development influenced by the college environment or student inputs (Astin, 1970).
- *Student persistence* – refers to students who enter a post-secondary institution and persist beyond the first year and continues to make progress toward graduation.
- *Student postsecondary option* – the option a student has to attend a two-year or four-year institution

- *Student readiness* – the academic skills and abilities required of students to meet the basic requirements of post-secondary education.
- *Two-year colleges* – are institutions that offer a two-year degree as its highest degree (used synonymously with *community colleges*, *junior colleges*, *technical colleges*, and *technical institutes*; Education Encyclopedia–StateUniversity.com, 2009).
- *Underprepared students* – students who have been inadequately prepared to meet the minimum requisites required to be successful at a post-secondary institution.

Chapter 2

Literature Review

Although the reasons students attend four-year colleges and universities are myriad, surprisingly, little is known about the reasons students choose to attend community college. Several prevailing studies provide compelling accounts of the decision to attend four-year institutions (Cabrera & Nasa, 2000; Hearn, 1984; Hossler, et al., 1989; Hossler & Gallagher, 1987; Hossler, et al., 1999; Jackson, 1978; Tierney, 1983), but only a handful of studies have systematically examined the factors that influence community college choice (Bers & Galowich, 2002; Inman & Mayes, 1999; Lanaan, 2003; Somers et al., 2006). The present research will address the gaps in the literature by examining the importance of academic, institutional, and background characteristics and how they influence students' decisions to attend community college.

This examination begins with a review of the literature relative to community college selection, including a brief history of community colleges to set the foundation for the study by examining the community college movement. A brief synopsis of the literature that addresses many reasons students decide to attend two-year institutions will be considered next. Finally, the literature will be synthesized, critiqued, and summarized relative to academic factors, institutional factors, and background characteristics that affect community college choice.

Historical Context of Community Colleges

The evolution of higher education in the U.S. rested on the premise of democratic ideals (Mellander, 1994). Therefore, the fight to maintain control at the local level was at the core of

the development of the U.S. educational system. As a result, the educational system was fragmented throughout American history as the purpose of higher education was ambiguous (Mellander, 1994). This was particularly true for the community college.

According to ASDHE (1971), the evolution of the public junior college movement began in the last half of the nineteenth century as a part or extension of high schools. In 1915, 74 junior colleges existed with 2,300 students enrolled (ASDHE, 1971; Cohen & Brawer, 2003) and the numbers increased to 586 junior colleges and 575,000 enrollments by 1952 (ASDHE, 1971). By the early 1960s, states such as California, Florida, Texas, and New York led the movement towards inexpensive, diverse educational opportunities (ASDHE, 1971). As a result, 2,499,837 students enrolled at 1,091 junior colleges by 1970; 847 were public two-year colleges with 2,366,028 enrollments. Today, there are over 1,200 two-year colleges—1,075 public and 169 private (Boone, 1997; Cohen & Brawer, 2003). Bearing this in mind, the evolution of the community college in the U.S. will be examined through a general overview of the community college movement in the Midwest and in California.

The Community College Movement in the Midwest and California

Midwest. The junior college movement was highly influenced by some prominent leaders in the field of education (Cohen & Brawer, 2003; Magruder, n.d.; Palinchak, 1969; Quigley & Bailey, 2003; Vaughn, 1982; Wattenbarger & Witt, 1995; Winter, 1964). Leaders such as Henry Phillips Tappan, University of Michigan, William Watts Folwell, University of Minnesota, David Starr Jordan, Stanford University, Alexis Lange, University of California at Berkeley, William Harper Rainey, University of Chicago, and J. Stanley Brown, superintendent of Joliet Schools, among others, all believed that the first two years of college instruction should occur in an institution separate from the university, because they supposed that there was a clear

distinction between college and university work. Essentially, college work consisted of a basic, general education, where university work was more specialized and directed toward a specific area of study (Palinchak, 1969). Upon this premise, they proposed educational plans that made junior colleges responsible for the first two-years of college, because they thought the last two-years of college should involve specialized training. Hence, training at a university should not be satiated with information that could be taught at the secondary level.

Harper, in particular, has been credited as the main advocate for this movement as he was responsible for the development of the oldest existing two-year college to date, Joliet Junior College, which was established in 1901 (ASDHE, 1971; Palinchak, 1969; Quigley & Bailey, 2003). As a result, the public junior college system in Chicago was founded in 1911. However, due to Harper's passing, a lack of leadership, a localized school system, and budgetary constraints, the junior college movement slowed in Illinois, but was galvanized in California.

California. Though the Midwest played a major role in the evolution of the two-year college, California was the first state to pass legislation authorizing the development of local community colleges in 1907 and local and state support in 1917 (Magruder, n.d.; Vaughn, 1982; Wattenbarger & Witt, 1995; Winter, 1964). In 1907, Senator Anthony Caminetti of Amador County proposed a law to establish public junior colleges in California that received overwhelming support from academic leaders such as Alexis Lange, Dean of the Department of Education at Berkley, and David Starr Jordan, President, Stanford University (Cohen & Brawer, 2003; Winter, 1964). His legislation allowed 18 high school districts the opportunity to offer post-high school courses for college credit to students who lived within and outside their school district (Winter, 1964). Despite the support the law received, efforts to implement the plan did

not manifest until 1910 when the Fresno Board of Education established a junior college policy that received favorable support from the community (Cohen & Brawer, 2003; Winter, 1964).

In 1915, the California State Attorney General ruled that high schools offering post-high school courses could not use state funding (Winter, 1964). However, after petitioning from several schools, Senator John Ballard of Los Angeles introduced a bill to the Legislature in 1917 (the Ballard Act) that allowed post-high school courses (introduced as “junior colleges” in the bill) to receive state funding for students equivalent to the funding received for high school students. California also passed a bill in 1921 to develop independent junior college districts with their own governing boards giving control at the local level; hence, serving as a model for other states that wanted to give localized authority to their junior colleges (Winter, 1964).

Decision to Attend Community College

Student motivation for attending community college has been in the vanguard of several research studies (Cofer & Somers, 2001; Inman & Mayes, 1999; Santos, 2004). Townsend (2007) found that students attend community college for reasons such as low tuition costs, convenient geographic location, and comfort with the institution. Students also are motivated to attend community colleges for academic reasons, for social reasons, and for reasons associated with the type of programs that are offered through community colleges (Grimes & David, 1999; Pope, 2002; Santos, 2004).

For instance, some students attend community college because of the types of courses community colleges offer, such as vocational and technical education and health care courses (Maxwell et al., 2003). Other students choose two-year colleges simply because of the special services they provide—on-campus housing and baccalaureate opportunities (Christie & Hutcheson, 2003; Townsend, 2007). Meanwhile, students who are the first in their family to go

to college, typically attend community college (Inman & Mayes, 1999; McConnell, 2000). Other reasons students go to community college because they take remedial courses and prerequisites for four-year institutions (Byrd & MacDonald, 2005), because of parental influence and family structure (Bers & Galowich, 2002; Lee et al., 2004), and because of their social and ethnic background (Maxwell & Shammass, 2007; Wells, 2008).

Somers et al. (2006) conducted the first of a series of community college choice studies that examined the reasons students attend two-year institutions. Focus groups involving more than 200 community college students were included in the study. The researchers created a hybrid model of eight factors to help identify why students attend community college. The factors were: student background characteristics, aspirations, educational achievement, social environment, financial variables, net cost, institutional characteristics, and institutional climate. These factors did begin to help explain the complex nature behind students deciding to attend community college.

From these studies, three major groups of factors emerge: academic factors, institutional factors, and background characteristics. Academic factors are elements such as academic preparation and degree aspirations that influence the decision students make relative to college choice. Institutional factors such institutional climate, location, and size help explain why students attend community college. Background characteristics that influence college choice include parental involvement, parental education, and SES.

Academic-Related Factors to Community College Choice

Academic factors play a critical role in the decision to attend community colleges. They are dimensions of education that influence the worldview of individuals relative to college choice. Academic factors, for the purposes of this study, will be categorized in two ways: *student*

readiness and *probability of academic success*. *Student readiness* refers to how well prepared (or underprepared) a first-year student is upon college entry. *Probability of academic success* looks at the factors that influence persistence and program completion among community college students.

Student Readiness

Researchers have identified student readiness as a factor that contributes to a student's decision to attend community college (Byrd & MacDonald, 2005). Student readiness research has identified three overarching themes relative to students attending community college. They are academic skills and abilities, student background, and non-traditional student self-concept (Inman & Mayes, 1999). Inman and Mayes' research contends that addressing these matters early in the academic careers of students can help reduce the number of academically underprepared students who enter college and can positively influence their college choice. Additionally, Grimes and David (1999) discovered that underprepared students attend community college to improve their reading and study skills. Doing so, equips students with the skills needed to enroll and persist at four-year institutions.

Students who attend community college vary in their academic skills and abilities. In the past, public community colleges enrolled more than 50 percent of all students entering postsecondary education in the United States (Moss & Young, 1995). They also enrolled more students who are not prepared to enter college. As a matter of fact, more than half of these students were required to take remedial courses. More recently, it has been discovered that nearly 41 percent of all first-year community college students and 29 percent of all incoming freshmen have poor reading, writing, and math skills (Byrd & MacDonald, 2005).

Cavanaugh (2004) wrote an article concerning the debate over barriers students face with respect to college access. The issue at the forefront of the discussion was whether lack of academic preparation or financial need of a student posed a larger barrier to gaining access to college. He argued financial barriers have been overstated. He also noted that some experts argue that lack of preparation is a major contributor to this phenomenon; while others argue that financial need and poor academic preparation are interrelated. However, the debate continues by noting that students who are college-ready are kept out due to financial reasons. Cavanaugh referenced a study conducted by the Manhattan Institute that found only 32 percent of all students who graduated from high school were ready for post-secondary education; of whom, only 20 percent were African American and 16 percent were Hispanic.

Probability of Academic Success

Transitioning from high school to college and integrating socially to the campus climate is vitally important to the academic success of community college students and their move to a four-year university (Hurtado et al., 1996). This is especially true among minority students. For instance, first-time community college freshmen share similar experiences in general; however, their transition to college varies in a number of ways by race and ethnicity. In particular, Whites believe that their race does not affect their college transition, while Blacks and Hispanics often feel isolated because of their ethnicity and regard their transition to be less than seamless (Weissman et al., 1998).

Student success factors and the likelihood of persistence are important when some students select a college. Some students elect to attend community colleges over four-year institutions because they believe the likelihood of academic success is greater for them at two-year institutions (Christie & Hutcheson, 2003). Generally, students who persist in two-year

colleges are white, nontraditional students attending public institutions (Cofer & Somers, 2001). However, students who initially attend a community college are less likely to receive a baccalaureate than are their counterparts who go directly to a four-year college or university (Christie & Hutcheson, 2003).

Considering this notion, Alfonso (2006) conducted a study that examined the effect attending a community college had on baccalaureate attainment in comparison to four-year institutions. She found that when not controlling for enrollment pathways and educational expectations, the probability of baccalaureate attainment is 26 percent lower for students enrolled in two-year colleges compared to students who first enroll in four-year institutions. She also discovered that when controlling for educational expectations, the likelihood of attaining a bachelor's degree increased. Conversely, the negative effect remained when controlling for enrollment pathways. This study also showed that when considering self-selection, students who would otherwise enroll in a four-year institution chose to enroll in a community college due to reduced tuitions or open-enrollment policies, hence, greatly reducing the likelihood of them attaining a bachelor's degree. Alfonso concluded that attending a community college versus a four-year institution may greatly reduce the likelihood of a student receiving a bachelor's degree.

Though the reasons students enroll in community colleges appear reasonable, some research suggests that attending a community college prior to attending a four-year college or university is not rational. This may be due to the fact that community college students reduce their chance of attaining a bachelor's degree by 15 percent to 20 percent (Townsend, 2007). One reason for this outcome could be what Clark (1960) referred to as the "cool-out effect," where students who attend community college have a tendency to lose their motivation for school and eventually drop out (Clark, 1960). However, on the other hand, students who have good study

habits, get involved on campus, and engage faculty outside of class are more likely to graduate from a community college and continue their studies after community college (Schmid & Abell; 2003).

Laanan (2003) conducted a study that looked at differences between private and public two-year college students in relation to degree aspirations. The *Student Information Form* (250 variables) administered by the Cooperative Institutional Research Program during the Fall 1996 term was used to gather data from a 13,801 (11,154 public and 2,647 private) first-time, full-time freshmen attending 75 two-year colleges (50 public and 25 private). Descriptive statistics and general logistical regressions were generated to determine student characteristics on the survey variables by institution. The correlations for background characteristics, high school experiences, and goals and values for each group revealed significant relationships relative to educational aspirations.

However, students attending two-year public and private colleges differed on several variables. For instance, students at private institutions were more likely to live on campus, while students at public institutions lived at home or near campus. Parents of students at two-year private institutions generally had higher levels of education than the parents of their counterparts. This outcome suggests that there is a positive relationship between SES and attending private two-year colleges. One-third of the students sampled in this study indicated aspirations toward obtaining an associate's degree. One-fourth of this sample indicated that they aspired to obtain a bachelor's and master's degree. This finding suggests that students attending two-year institutions do have intentions or aspirations of attending or transferring to four-year institutions. Yet and still, they are not guaranteed to achieve their educational goals even though they have such intentions.

Social class is another important aspect that impacts student persistence within higher education. Social class refers to the social identities, specified roles, and status assumed by individuals within a particular social system as defined by the majority or by individuals with great social influence (Middleton, 2003). Lee et al. (2004) identified social class as a factor relative to academic success and social mobility. They found that parental income influences students' motivation to persist or not; the motivational level to persist in school is greater for students with parents who have high incomes. However, social class is less of a factor for persistence among community college students compared to students at four-year institutions.

In regard to social class, Corrigan (2003) conducted a study that examined challenges that low-income college students face relative to academic persistence. She noted that low-income students are at higher risk of dropping out of school than are high-income students. She attributed this outcome to several factors such as academic preparation, family dynamics, institutional choice, class attendance, and employment. She also noted that low-income students are more likely to be independent students, unlike their wealthy counterparts. Further, she stated that the probability of persistence for low-income dependent students is higher than the probability for persistence among low-income independent students. These findings suggest that social class may be a good predictor of persistence among community college students.

Academic and social integration of underprepared students also is important to student persistence (Moss & Young, 1995). The probability of student persistence is increased as long as the intentions and commitment of the student is matched with the academic and social systems of the institution (Tinto, 1975, 1987). However, in most cases, the perception of social integration into community college is higher for students compared to the perceptions that faculty, counselors, and administrators have relative to this event (Moss & Young, 1995). Sometimes,

students overestimate their ability to integrate into community college academically and socially, which leads to them dropping out of school, because they do not recognize their deficiencies until it is too late. Often, parents, as well, have the same high and, sometimes, unrealistic expectations for their children. They expect the community college to help them (children) meet their desired goals, even if their children do not have the academic skills and abilities to complete their respective programs (Bers & Galowich, 2002).

Tinto's theory of social integration may help explain these shortcomings. Tinto (1975, 1987) argued that social integration is a good predictor of academic persistence among community college students. He noticed in his research that the probability of student academic success in post-secondary education increased as students become more engaged with their institutions—within or outside of class. He also argued that the more institutions create healthy academic and social environments for their students within their campus community, the more likely students will persist beyond their first year.

Academic skills and abilities that influence college choice are important in their own right. For instance, the academic skills and abilities of students help facilitate the decision-making process for college students. This is especially true for underprepared students who enter community college needing remediation. Community colleges provide remediation opportunities for their students regularly. This is an important factor considering that most of the students who enter community college have poor academic skills. Adequate preparation is an important dimension of student success. Student success is influenced in varying degrees by a student's ability to transition successfully from high school to college and by their ability to integrate into the college community socially. Though these factors play an important role in college choice,

they are not the only influences students have to consider when choosing a college. Institutional factors also have to be taken into account.

Institutional-Related Factors to Community College Choice

Literature relative to the institutional factors that influence college choice is emerging. Several researchers have considered this subject recently (Bailey et al., 2005; Goble, Rosenbaum, & Stephan, 2008; Jenkins, 2007; Rosenbaum, Deil-Amen, & Person, 2006; Titus, 2004). They found that *faculty and staff influences, special programs and initiatives, and institutional climate and other characteristics* do influence community college choice.

Faculty and Staff Influences

Community colleges are facilitated by a variety of activities and practices carried out by the entire community college body (Weissman et al., 1998), including helping students make the transition from high school to college smoothly. Considering this, community college students generally are attracted to institutions that meet their interests and needs. For this and other reasons, community college faculty and administrators and the programs they offer at their institution play a major role in the decisions made by students who attend two-year institutions.

For instance, Orr (2001) conducted a study that examined the recruitment barriers two-year colleges face relative to recruiting students of color using institutional characteristics and enrollment data from National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). This 57-item national survey was administered to 1,173 chief student affairs officers (CSAOs) regarding the recruitment barriers and strategies for students of color at their colleges. A total of 641 surveys of 1,173 were returned from 562 of 641 institutions represented in the survey sample. Regression analyses were run to identify predictors of enrollments percentages of students of color at two-year colleges.

The first regression model examining the demographic characteristics of CSAOs revealed that having CSAOs of color on staff positively influenced the recruitment of students of color. The second model indicated that urban two-year colleges were good predictors of high enrollment percentages of students of color. Colleges whose survival was dependent on affirmative action as presented in the third regression model also had high percentages of students of color. As indicated in the fourth model, institutions with recruitment strategies such as producing literature in the native language of a student of color, working with minority high schools, having minorities on the board of trustees, and dual-enrollment programs all had statistically significant outcomes. The fifth regression model indicated that the percentage of faculty members and administrators of color were strong predictors of the percentage of students of colors enrolled in a college. This study shows how strongly the demographic make-up of an institution influences students' decisions to attend two-year colleges.

Special Initiatives and Programs

The programs offered at community colleges also impact the decisions made by students to attend these institutions. Some community colleges offer special initiatives, such as mentoring programs and learning communities, as innovative ways to promote success. For example, in a study that examined the outlook of 250 minority students regarding the mentoring process and attention given to diversity at their community college, Pope (2002) found that mentoring is an important aspect of student success in community colleges. He also discovered that minority students had varied perspectives relative to mentoring programs, most of which are positive.

Some community colleges offer dual credit programs to prepare students for higher education. Dual credit programs allow high school students to receive high school and college credit for post-secondary courses taken on college campuses or at high schools (Barnett &

Andrews, 2002). Students, who participate in these programs, generally, are awarded credit for courses they pass instead of having to be concerned with receiving college credit for passing an advanced placement exam (Hebert, 2001). Initially, dual credit courses were designed to serve academically prepared students but have been modified to accept all students open to accepting the challenge and rigor associated with an accelerated college curriculum (Andrews & Marshall, 1991; Clark 2001).

The campus environment of community colleges continues to change. Some community colleges are offering on-campus housing, honors programs, and baccalaureates to their students (Townsend, 2007), as well as a diverse, community climate (Maxwell & Shammass, 2007). On-campus housing is being used to accommodate the changing demographics of the community college environment. Further, some traditional age students are gravitating towards community colleges because of honors programs (Townsend, 2007). Students also are drawn to schools that offer tuition assistance programs, whether it be federal aid, student aid, institutional aid, or private grants or scholarships (Rifkin & McKinney, 1996). Offering financial aid to students offsets the economic barriers they face relative to tuition costs and makes attending community college more attractive.

One new program, “learning communities,” has been found effective and useful to community college students. Engstrom and Tinto (2008) looked at how learning communities at 19 post-secondary institutions could improve the probability of success among under-prepared, low-income students. They defined learning communities as small groups of students who interact with each other socially and academically on a regular basis. They sampled 2,615 students in learning communities and 3,114 students in comparison classrooms. Engstrom and Tinto found that students involved in learning communities “were more academically and

socially engaged” than their peers who did not participate in these groups (p. 47). They also noticed that under-prepared, low-income students who participated in learning communities were more likely to persist to the next academic school year. Their study also showed that the students who participated in learning communities viewed the learning communities as a safe haven and were more apt to express themselves openly within these communities, because they had established relationships and trust with the individuals within their learning community. Students were validated and supported within their learning communities which increased their sense of belongingness in respect to their institution.

Institutional Climate and Other Characteristics

Goble, Rosenbaum, and Stephan (2008) examined the institutional factors that predict student success for community college students. Data from the National Educational Longitudinal Study Restricted Use File (NELS: 88-00) and the Integrated Postsecondary Education Data System (IPEDS) were used to study these factors. The sample consisted of 1,067 students. The study revealed that the graduation rate for an institution positively influenced student degree completion. Large proportions of minority student enrollment in a college adversely affected student graduation rates. Institutions with large proportions of part-time faculty reduced the graduation odds of higher achieving students. Middle achieving students did better at suburban colleges compared to students at urban colleges. They also have higher success rates at smaller schools, while higher achievers do better at mid-size colleges. These findings indicate that institutional attributes affect student outcomes.

In another study, Kisker and Oulcalt (2005) examined the effects that faculty demographics and assignments have on student success in community college. They identified who taught developmental and honors courses in community colleges as well if there were any

significant relationships between the personal and professional characteristics of these groups. They found that Asian Americans and instructors identified as “Other” were more likely to teach honors courses compared to other groups. However, after Kisker and Oulcalt controlled for other teacher characteristics, the statistical significant differences were abated. African Americans and Native Americans were more likely to teach developmental courses, while instructors identified as “Other” were less likely than any of the other groups to teach these courses. Instructors with a Ph.D. were less likely to teach developmental courses and were more likely to participate in academic research and publications than were their counterparts. Overall, there were no statistically significant findings in regard to race and ethnicity when teaching honors courses. However, African Americans and Native Americans were being employed to teach the developmental courses. These findings suggest that the institutional climate of a community college plays a major role in student success and recruitment.

The faculty and administration of a community college is invaluable to its mission. They represent what an institution has, and, in some cases, what it does not have to offer its students. The probability of students attending a certain institution increases when they identify with an institution and its staff. Special programming and healthy environmental and learning climates prove to be inviting characteristics that attract community college students. These and other institutional features are factors considered by students when they are choosing a college. But the discussion does not end here. Background characteristics of students also influence community college choice.

Background Characteristics that Influence Community College Choice

Prospective college students are socialized according to interactions within their respective environments. That is, before students make their decision to attend a particular

community college, they are exposed to numerous social conditions that affect their judgment. Social conditions such as parental influences, extended family and peer associations, and other environmental circumstances shape their worldview. These and other background characteristics influence a student's decision to attend community college or not. The following background characteristics will be discussed in this section: *first generation college students, socioeconomic status and tuition affordability, family history and parental engagement, and race and ethnicity.*

First-Generation College Students

More than half of the community college population is first-generation college students (Dougherty, 1994; McConnell, 2000). They represent a wide-array of cultures with divergent aspirations, stimuli, and constraints (Cross, 1990; Nomi, 2005; Terenzini et al., 1996). First-generation students generally are female and older (Inman & Mayes, 1999; Nomi, 2005) and they attend college, typically, for career advancement (Nomi, 2005; Santos, 2004). Generally, their pre-college knowledge is limited, and they do not fully understand the admissions and enrollment process of college, as well as what is expected of them academically (McConnell, 2000).

More likely than not, the reading, math, and critical thinking skills of first-generation students are lower than those skills for students with a family history of college attendance (Terenzini et al., 1996). For instance, Riehl (1994) noted that first-semester grade point averages (GPAs) were slightly lower for first-generation students at Indiana State University compared to other students (2.34 and 2.45, respectively). He attributes this outcome to the fact that students who are the first in their family to attend college lack understanding of the norms, expectations, and demands of post-secondary education.

Some students choose two-year colleges because they lack knowledge of four-year institutions due to the fact that they are the first in their family to attend college (Inman & Mayes, 1999). Research suggests that first-generation college students differ significantly from students with parents who have had prior-college exposure, typically, because of socioeconomic status, financial and family obligations, and poor academic preparation (Byrd & MacDonald, 2005; Inman & Mayes, 1999; Lee et al., 2004; Maxwell et al., 2003). However, Inman & Mayes (1999) stated that the community college experience is perfect for first-generation students and their academic success, generally, because of their personal goals, motivation, and post-college intentions. Nomi's (2005) research supports these findings as she notes that 46 percent of first-generation students attend community college to prepare for future careers.

In a study that examined the post-secondary educational enrollment trends of students in Canada, Drolet (2005) noted strong correlations between parents' education and post-secondary participation. She noticed considerable differences from 1996-2001 among students with parents' who had a high school education or less compared to students with parents who studied at the post-secondary level. However, the correlation was not as strong among these groups when students attending community college were measured separately. These findings suggest that first-generation students are more likely to attend community college before attending a four-year college or university.

The American Association of Community Colleges (AACC) and ACT surveyed 49,893 first-generation students enrolled in credit-bearing courses at 158 community colleges between the Fall semester of 2001 and the Fall semester of 2003 (Nomi, 2005). Survey findings indicated that first-generation community college students, generally, are employed, non-traditional-aged women with a family at home. Other findings suggest that first-generation students attend

community college to improve their job skills and to acquire an associate degree. The survey also shows that first-generation community college students are inclined to take fewer hours, face greater financial problems, and rely on financial aid as a major source of funding.

Further, first-generation community college students expressed greater satisfaction with their community college experience compared to their peers. Nomi (2005) also reported that parents of first-generation students are less likely to offer financial support for school-related expenses and have less influence on their student's education decisions compared to parents with post-secondary education. These findings show that first-generation students face more obstacles than their counterparts that may reduce the likelihood of their academic success and persistence.

According to Warburton, Bugarin, and Nuñez (2001), the number of first-generation students who succeed in college is disproportionate compared to second-generation college students. The three-year persistence rate between these groups is 15 percent; first-generation (73 percent) and second-generation (88 percent). Eighty-one percent of first-generation students who are well-prepared for post-secondary education are more likely to persist in four-year institutions due to their exposure to rigorous high school coursework (Warburton, et al., 2001). The rate of academic success is significantly lower for first-generation students who do not exceed the basic core requirements (55 percent). These rates hold constant even after controlling for variables such as, academic preparation, post-secondary achievement, and parental-educational attainments.

Pike and Kuh (2005) made this very point about academic success disparities in a study that looked at the relationship between the background characteristics, college experiences, and learning outcomes of first- and second-generation students. To assess student gains among these groups, the researchers looked at their background characteristics relative to academic and social

engagement, academic and social integration, and college environment. A stratified random sample of 3,000 four-year students who completed the *College Student Experiences Questionnaire (CSEQ), Fourth Edition* was selected for the study. First-generation for this study was defined as students whose parents or legal guardian did not complete a college degree. Second-generation was defined as students who had at least one parent or legal guardian who completed a college degree.

Findings from this study reveal that first-generation students fared less favorably on certain college success indicators compared to their counterparts due to academic aspirations and living arrangements. As well, first-generation students aspiring to pursue advanced degrees were more engaged in school and showed greater learning and intellectual gains than did students with similar characteristics whose degree aspirations were different. Further, first-generation college students seemed to be less engaged in campus and after class activities than were second-generation students, generally, because they were the first in their family to attend college and they did not understand the value of campus engagement and because they lived off campus. Other issues that first-generation college students face were associated with socioeconomic status and the ability to pay for their education.

Socioeconomic Status and Tuition Affordability

The socioeconomic status of a student also influences college choice (Inman & Mayes, 1999; Santos, 2004; Terenzini et al., 1996). Higher education costs have risen over the years displacing low-income students due to unmet tuition needs causing them to attend college on a part-time basis (Advisory Committee on Student Financial Aid, 2001). Enrollment rates are three to four times higher for students from higher income families compared to students from low-income backgrounds (Francis & Morning, 1993). This may be true, because, “low-income

(students) differ from their more affluent peers in several ways: they are more likely to be female, racial or ethnic minorities, older, and supporting a family” (Corrigan, 2003, p. 26).

According to Francis and Morning (1993), this issue continues to grow. They looked at the role that family income plays on access to college. They noticed that family income level affects academic preparation, college access, institutional choice, enrollment patterns, and educational attainment of students. They also discovered that the success rate of government-sponsored financial aid programs relative to financial barriers and increasing access to post-secondary education for low-income families have been marginal. Additionally, they noticed that college was becoming less affordable for low-income and middle-income students, even though colleges were providing institutionally-funded grants to offset the costs for college among these groups. Francis and Morning also pointed out that access to college would diminish for low-income college students if more support was not offered to needy students.

Research by Usher (2004) supported this thought of college access diminishing for low-income students. He conducted a study that examined need-based subsidies for post-secondary students in Canada. His study showed that using current criteria, students from upper-income families receive just as much need-based support as students from low-income families do. According to his findings, students from upper-income families receive 40 percent of all grants and loans. This finding suggests that need-based aid is not the most effective way to offer post-secondary financial assistance to students from low-income families. Usher also discovered that nearly 60 percent of all grants go to upper-income families’ students--generally, independent students --while 58 percent of all loans go to poorer students.

Research asserts that socioeconomic status dictates which schools students are more likely to attend (Astin, 1975; Bers & Galowich, 2002; Lee et al., 2004). Some research shows

that parents with greater socioeconomic capital have greater influence over their children's college choice (Bers & Galowich, 2002). Generally, students from affluent backgrounds prefer four-year colleges and universities over community colleges. Other students choose to attend two-year colleges, because the tuition at community colleges is significantly lower than that of four-year colleges and universities (Townsend, 2007). Low tuition costs associated with two-year colleges is more attractive to students with limited economic resources, because it helps reduce the overall costs associated with post-secondary education. However, financial aid increases the likelihood of some students attending community college (Rifkin & McKinney, 1996).

Cofer and Somers (2001) conducted an examination of how the cost of tuition and debt load affects student persistence at two-year institutions. Findings in that study indicated that tuition and high student loan debt have adverse effects on student persistence. Further, their study showed that unsubsidized loans along with other financial aid positively affected student persistence, which increased access to college. Generally, students from low-income backgrounds rely on these funding sources to help pay for college, simply, because their financial resources are limited (Lee et al., 2004).

Brownstein (2000) noted that the number of males entering college is eroding. He linked this erosion to race and economic status. He noted that college enrollments for men are down predominantly among low-income, minority males. Brownstein contended that economic class and academic preparation were better determinants of college access than attendance and gender. He noted that male students were far less likely to attend college, if they were from low-income backgrounds. He also noted that as income increased among races the disparity between genders decreased except among African American students. The impact that racial and economic status

has on college access and academic success is closely related to familial experiences and interactions.

Family History and Parental Engagement

Some studies have shown that family influence impacts community college enrollment (Grimes & David, 1999; Inman & Mayes, 1999; Santos, 2004). First hand knowledge that parents have about college may influence their involvement in their child's education, provide access to college information, and help them find ways to finance college for their children (Choy et al., 2000; McDonough, 1997). Parents with college backgrounds generally are familiar with the benefits of post-secondary education and share that information with their families (Nomi, 2005). "Parents who have not attended college, on the other hand, tend to have less direct knowledge of the economic and social benefits of a postsecondary education" (Lee et al., 2004, p. 2). Further, parents of first-generation community college students have less influence over the educational decisions of their children (Nomi, 2005).

Bers and Galowich (2002) studied the roles that parents play in the decision process students make relative to attending community college. Their study indicated that students' whose parents' help them prepare for college early are less likely to attend a community college than are those students who make last minute preparations. One group of researchers investigated and assessed the experiential and attitudinal differences of community college students relative to multiple levels of parental education and their effects on academic success and social mobility (Lee et al., 2004). They found that when it comes to a parent's involvement in their student's academic career that parental education level and income are positively correlated with the academic success of their children and that large disparities exist between parents with high level and low level education in this regard. This suggested that parental intervention is a vital factor,

when it comes to school choice and that students from more affluent families have a significant advantage over students from more modest backgrounds.

Bers (2005) conducted a descriptive and exploratory study based on prior research to ascertain the opinions and attitudes of parents of traditional-aged community college students and the roles they assume in the choice their children make relative to community college choice. She used the conceptual frameworks of social capital, the multistage process of college choice, and parental expectations to help explain this study. A total of 2,223 usable surveys were returned for data collection by the students and parents participating in Ber's study out of 6,432.

Seventy-two percent of the surveys were completed by the mothers of students enrolled in community college in the Fall of 2002. Seventy-nine percent of the total respondents were White and 21 percent were minorities. Eighty-six percent of the sample had some college or a college degree. Other findings in the study indicated that parents have a general understanding of their child's abilities but do not realize or acknowledge that many students are not prepared for college. Further, this study revealed that 90 percent of students sampled decided to attend college during or immediately after high school. Fewer students had plans to attend college prior to high school. One major finding cited by parents included in this study was that money and standards of living influenced their decisions more so than the characteristics of the college itself.

Race and Ethnicity

Research studies show that a person's ethnic background is correlated to college selection (Cofer & Somers, 2001; Grimes & David, 1999; Lee et al., 2004; Maxwell et al., 2003; Maxwell & Shammas, 2004; Pope, 2002; Santos, 2004). For instance, some underrepresented minorities attended community college to jump-start their post-secondary education with the intention of transferring to a four-year college to pursue a baccalaureate (Rendon, 1993). This phenomenon

occurs for a number of reasons ranging from reduced tuition costs to improving writing and study skills to taking college prerequisites. Santos (2004) found that Hispanic students attend community college to learn more about their community, to improve themselves personally, and to acquire more marketable skills that will lead to a career rather than a job. Other students of color attend community college, because they saw the transition from secondary schools to post-secondary institutions more favorably at two-year colleges than four-year universities (Harnish & Lynch, 2005; Hoffman, 2003).

Rendon (1993) found that community college also represents a place of learning, hope, opportunity, and a chance to succeed for minority students. Further, “demographic trends show that the proportion of racial and ethnic minority students doubled in the colleges from 15.7 percent to 30.3 percent between 1976 and 1996 and will continue to increase in the next 25 years” (Maxwell & Shammass, 2007, p. 1), because of healthier campus climates, improved student relations, and quality academic instruction. Considering this, just above 42 percent of African American students, 50 percent of Native American students, and almost 56 percent of Hispanic students enroll in higher education programs (Pope, 2002), which raises the question as to why community colleges are attractive to ethnic minority students as well as students from other backgrounds.

For Latinos, social connections are important to their decision to attend college. Person and Rosenbaum (2006) conducted a study that examined the enrollment decisions Latino students made relative to two-year colleges and the relationship their choices had on later college experiences. They explored this topic by examining the benefits and drawbacks of *chain migration* and *ethnic enclaves*. *Chain migration* refers to the influence of social networks on immigration patterns relative to college attendance. *Ethnic enclaves* refer to the distinct social

boundaries of a racial or ethnic group that exist within the community college environment. Data for this study were drawn from 14 Midwestern community colleges – 7 public, 7 private – using both qualitative and quantitative methods.

Findings in the study indicated that outside geographic proximity, Latino students' college selection processes rely almost exclusively on family and friends. These actions led to chain enrollment— Latino student enrollment into community colleges strictly on the basis of limited information gathered from their social communities and without the advice of more knowledgeable sources. Beyond this, their decisions after enrolling in community college were heavily influenced by these same groups, which led to isolation at their institutions due to their exclusive interaction with members of their social group. Person and Rosenbaum's research also suggested that Latino students who enroll in community college with limited information generally had difficulties with integrating into the school culture academically and socially due to limited social contacts with individuals outside of their social community.

Generally, community colleges are more ethnically diverse than four-year colleges and universities. In particular, 36 percent of all first-generation students are minorities, compared to 27 percent who have at least one parent with post-secondary education experience and 29 percent who have two parents with post-secondary degrees (Nomi, 2005). Fifty-three percent of Hispanic community college students are first-generation, 43percent are Native American, and 41percent are Black, while, approximately, 35 percent of both Asian and White students are the first to acquire a post-secondary education. Sizeable numbers of Hispanic (40 percent), Asian (42 percent), Native American (50 percent), Black (50 percent), and White (54 percent) students have at least one parent who has at least begun or completed their post-secondary education. Twenty-two percent of Asian students have two parents who have completed their post-

secondary education compared to Whites (11 percent), Blacks (9 percent), Hispanics (7 percent), and Native Americans (7 percent).

Considering the notion of diversity, Kurlaender (2006) conducted a study that explored the factors that influence the high percentage of Latino community college enrollment compared to Whites and African Americans. To identify race as a factor for higher rates of Latino enrollments in community colleges than their White and African American peers, the researcher controlled for socioeconomic status, degree aspirations, prior academic achievement and preparation, and differences among public postsecondary institutions. Data from the National Educational Longitudinal Study (NELS) of a nationally representative cohort of 1988 8th graders through 2000 were used to draw findings relative to this phenomenon.

Relative to SES and prior academic achievement, this study showed that each factor affected the type of institution selected. Students from more affluent backgrounds were more likely to attend four-year institutions. This finding holds true for African Americans and Whites, but not for Latinos. Latinos regardless of SES had a higher propensity for enrolling in community colleges. As well, Latinos with similar academic achievements as their African American and White peers had a greater proclivity to attend community college. This study also indicated that the probability of Latinos pursuing a baccalaureate is slightly lower than African Americans (42.9 percent to 45.2 percent respectively) and well below Whites (55.7 percent). As well, Latinos and African Americans (45.5percent and 40.4percent respectively) were less likely to take postsecondary entrance exams compared to their White peers (63.85 percent). Finally, when controlling for states with prominent community college systems, Latino students had a strong desire to attend community colleges compared to their peers considered in this study. These findings suggest that race plays an important role in community college choice.

The decisions of community college students relative to college are different when they are the first in their family to attend college. Some of their decisions are altered, because they lack relevant college knowledge and are unaware of the academic and social expectations in regard to higher education. Socioeconomic status, low tuition, family obligations, parental involvement, and race and ethnicity are factors that also influence student awareness. Further, the number of first-generation community college students is disproportionate compared to students who have at least one parent who completed college. Their probability to persist in college is lower as well.

Overall, the literature relative to community college choice is compelling; yet, it still is limited. The literature indicates student choose to attend community college because of various academic factors and institutional factors. Background characteristics also influence college selection. This literature review explored these factors, but could not determine which perspective had the most bearing on college selection. To gain greater insight in this matter, academic, institutional, and background factors that influence community college choice will be investigated in the proposed study.

Chapter 3

Methodology

The central premise of this study was that academic and institutional factors influence the decisions students make relative to college choice and that the background characteristics of students also influence those same decisions. Such factors have been identified in the literature review. However, to my knowledge, prior to this study no empirical study had been done to directly explore the relationship among these factors. The Academic, Institutional, and Background Student Choice (AIBSC) model (Figure 1) was used to assess the relative influences that academic, institutional, and background factors have on a student's choice to attend a community college. The AIBSC conceptual framework allowed for data to be collected, analyzed, and discussed according to three general themes: *academic factors*, *institutional factors*, and *background characteristics*. *Academic factors* refer to elements that are related to the academic temperament of a student. *Institutional factors* refer to the general characteristics and distinctions of a post-secondary facility. *Background characteristics* refer to various ideals and characteristics that relate to the socialization of a student.

There were 10 academic factors, 5 institutional factors, and 14 background characteristics considered in the conceptual framework of this study. Various items from the 2005 CIRP Freshman Survey were selected to address these factors. The factors considered in the AIBSC model along with the associated Freshman Survey item numbers for each factor are below. Academic factors included High School Grad – the high school graduation status of the students (Item 4), High School GPA – the students' high school grade point average (Item 7), High

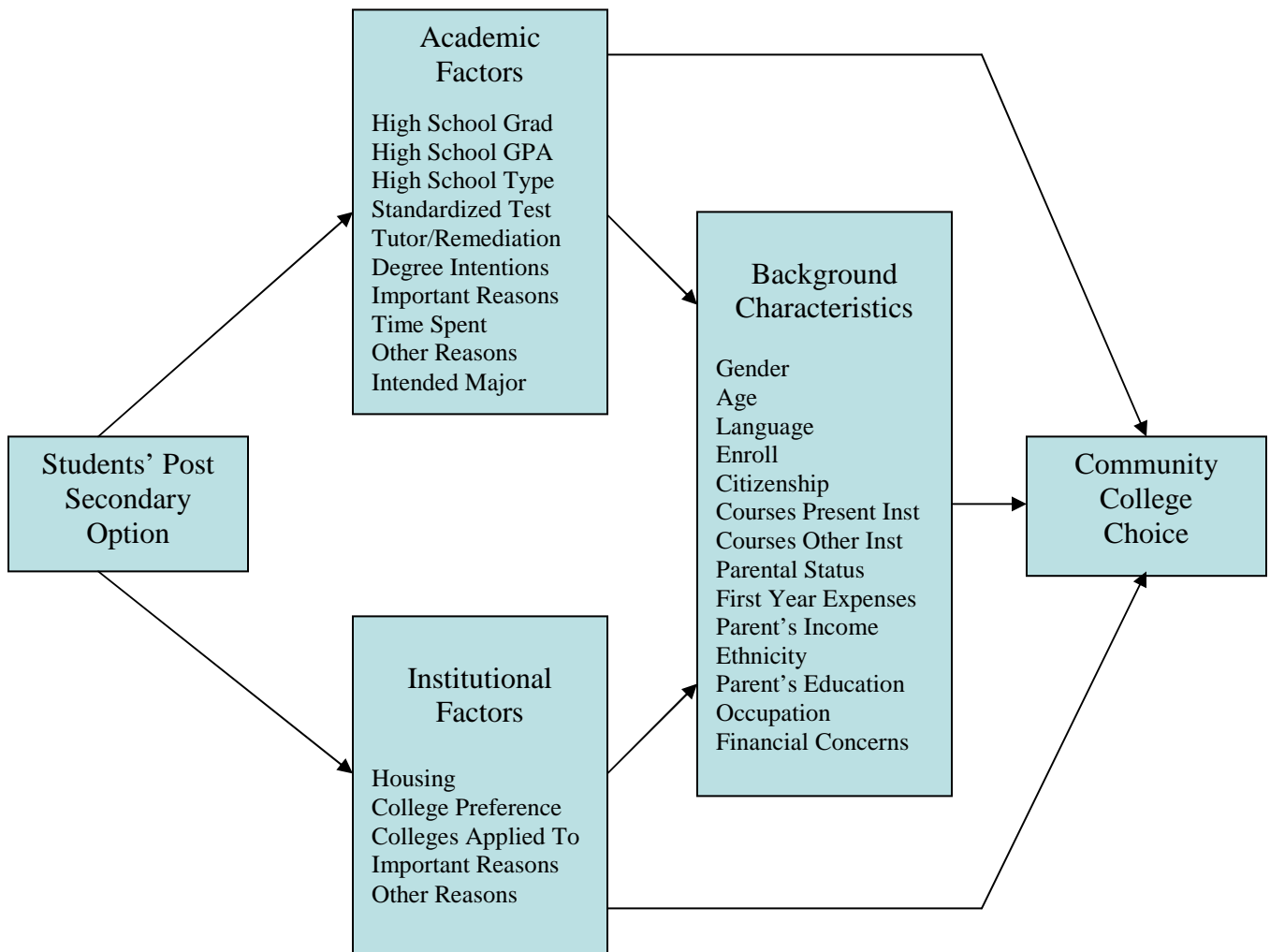


FIG. 1 Academic, Institutional, and Background Student Choice (AIBSC) Path Analysis Model

School Type – the type of high school from which the students attended (Item 9), Standardized Test – the standardized test scores for each student (Item 10), Tutor/Remediation – the past participation of or the expectation of tutoring and/or remediation in core academic subjects such as English, reading, mathematics, social studies, science, foreign language, and writing (Item 19), Degree Intentions – intended degree aspirations of each student (Item 20), Important Reasons – the importance of various reasons to attend college (Item 29), Time Spent – time spent during high school participating in various activities (Item 34), and Other Reasons – other reasons that influenced their decision to attend a particular college (Item 36). Institutional factors

considered in this model were Housing – housing arrangements made by the students for the Fall semester (Item 16), College Preference –college choice preference of the students’ current institution (Item 17), Important Reasons –importance of various reasons to attend college (Item 29), time spent during high school participating in various activities (Item 34), and Other Reasons – other reasons that influenced their decision to attend a particular college (Item 36). Background characteristics incorporated into this model included Gender – the gender of each student (Item 1), Age –age of each student (Item 2), Language – primary language of each student (Item 3), Enroll –enrollment status of each student (Item 5), Citizenship – the citizenship of each student (Item 11), Courses Present Institution - courses taken for credit at the current institution (Item 14), Courses Other Institution – courses taken for credit at other institutions (Item 15), Parental Status –current living or marital status of the students’ parents (Item 21), First Year Expenses –financial sources expected to cover first year college expenses (Item 22), Parent’s Income – the household income of students’ parents (Item 23), Ethnicity –ethnic background of each student (Item 25), Parent’s Education – education level of the students’ parents (Item 28), Occupation – current occupation of the students’ parents and the students’ probable career occupation (Item32), and Financial Concerns – students’ concern about ability to finance college (Item 35).

Understanding the factors that impact two-year college attendance and program enrollment nationally and the role that background characteristics play relative to institutional choice among these groups was the impetus of this study. Specifically, the following questions guided the process of inquiry:

1. Nationally, what academic and/or institutional factors influence students’ choices to attend a two-year college?

2. Nationally, how, if at all, do background characteristics moderate academic and/or institutional factors among community college choice?

Data Collection

Instrumentation

Data for this study were gathered using secondary quantitative data acquired from the Cooperative Institutional Research Program (CIRP), a research initiative sponsored by the American Council on Education (ACE) and the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). CIRP provided data relative to the academic, institutional, and background factors of community college students surveyed during the administration of the 2005 CIRP Freshman Survey. To assess academic, institutional, and background factors among community college students nationally, 31 items from the 2005 CIRP Freshman Survey were initially identified to answer the two research questions. Ten item groups (Items 4, 7, 9, 10, 19, 20, 29, 34, 36, and 37) addressed academic factors. Five item groups (Items 16, 17, 18, 29, and 36) addressed institutional factors. Fourteen item groups (Items 1, 2, 3, 5, 11, 14, 15, 21, 22, 23, 25, 28, 32, and 35) provided general background factors. A number of these item groups contained multiple sub-items related to the research study.

The sample for this study was taken from the full sample of students who took the 2005 Freshman Survey. It was composed of students who attended two-year and four-year institutions across the U.S. The size of the sample for this study was 17,188. The dataset included all two-year students who took the survey (N=4,548) along with a sample of four-year students who took the same survey (N=12,640). The actual 2005 CIRP Freshman Survey dataset contained more than 100,000 students.

The purpose of the reduced four-year sample was to make the comparisons more balanced. The four-year sample was created by matching the four-year students to the two-year students based on three dimensions: race (proportion of white to nonwhite), mother's education level, and average high school grade. For each student type (a total of 128 possible types), three four-year students were selected for every two-year student. Four-year students were selected at random within each category. Four-year students were selected by convenience when there were not three times as many four-year students with similar characteristics as the two-year students within a category. Only students without missing values on race, mother's education, or high school GPA were included in the two-year sample and were eligible for selection into the four-year sample.

Validity and reliability of data collection instruments were required to control for internal threats and to strengthen and give credibility to the results of the study (Gall, Gall, & Borg, 2007). Under this premise, the CIRP Freshman Survey provided an effective means of addressing the study's research questions for a variety of reasons. First, the CIRP Freshman Survey's validity and reliability has already been carefully measured through several national studies (Astin, 1991; Astin, 1993; HERI, n.d.; Luo & Jamieson-Drake, 2005). Second, similar studies have been conducted using the CIRP Freshman Survey (Cerna, Perez, & Saenz, 2007). Third, it provided an opportunity to draw qualexaminentitative relationships between research-based factors that affect the college decisions of students. Finally, it offered an opportunity to generalize the results for a national population.

Procedures

Several tests were run on the data to determine which variables to include in the initial stages of the study. This was necessary because more than 80 variables were included in the

original data set. First, for continuous variables, an independent t-test was run to determine the difference between the two groups (two-year college attendees versus four-year college attendees) and the number of colleges applied to by students, SAT verbal score, SAT math score, ACT composite score, the distance students live from college, and the high school grade point average of students and the type of institution they attend. There were no significant differences between groups for high school grade point average of the students $t(17031) = -.884, p = .377$. As a result of this outcome, high school GPA was excluded from the remaining procedures. Significant differences were observed for the number of colleges applied to by students $t(9461) = -40.288, p = .000$, SAT verbal scores $t(7249) = -12.395, p = .000$, SAT math scores, $t(7250) = -15.410, p = .000$, ACT composite scores, $t(1535) = -11.833, p = .000$, and the distance students live from college $t(16707) = 32.778, p = .000$. Factors with significant t-scores were included in the linear regression models (see Table 1).

Table 1: Independent Samples Results for Continuous Variables Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
	t	df	Sig. (2-tailed)
Number of colleges applied to by students	-40.288*	9461	.000
Students' SAT verbal score	-12.395*	7249	.000
Students' SAT math score	-15.410*	7250	.000
Students' ACT composite score	-11.833*	1535	.000
Distance students live from college	-32.778*	16707	.000
Students' high school GPA	-.884	17031	.377
*Indicates the coefficient is statistically significant at .001 level.			

Next, two multiple regressions analyses were conducted to determine which continuous variables predict community college choice. One analysis included the number of colleges applied to by students and the distance students live from college, while the second analysis included the distance students live from college, the number of colleges applied to by students, SAT verbal scores, SAT math scores, and ACT composite scores. Two models were produced to see how, if at all, standardized scores affect community college prediction. The regression equation for the first model, $R^2 = .023$, $F(2, 1336) = 15.574$, $p = .000$ and for the second model, $R^2 = .041$, $F(5, 1333) = 11.316$, $p = .000$ were significant. Based upon these results, both models

Table 2: Linear Regression Results for the Continuous Variables Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
Variable	t	df	Sig.
Model 1			
How many miles is this college from your permanent home?	2.226*	2	.026
To how many colleges other than this one did you apply for admission this year?	4.720***	2	.000
Model 2			
How many miles is this college from your permanent home?	1.052	5	.293
To how many colleges other than this one did you apply for admission this year?	4.651***	5	.000
SAT Verbal Score	.156	5	.876
SAT Math Score	2.755**	5	.006
ACT Composite Score	.578	5	.563
*Indicates the coefficient is statistically significant at .05 level. ** Indicates the coefficient is statistically significant at .01 level. *** Indicates the coefficient is statistically significant at .001 level.			

would be good predictors of community college attendance. However, because the purpose for this stage of the study was to identify predictor variables for community college choice to be used during the logistic analyses, each variable was examined individually within the models.

Model 1 revealed that there were significant differences between two-year and four-year students for the distance students live from college, $t(2) = 2.226$, $p = .026$, and for the number of colleges applied to by students, $t(2) = 4.72$, $p = .000$. There were significant differences between groups for the number of colleges applied to by students, $t(5) = 4.651$, $p = .000$, and SAT math scores, $t(5) = 2.755$, $p = .006$, in the second model. No significant differences were observed for the distance students live from college, $t(5) = 1.052$, $p = .293$, SAT verbal scores, $t(5) = .156$, $p = .876$, and ACT composite scores, $t(5) = .578$, $p = .563$ in Model 2. The distance students live from college, the number of colleges applied to by students, and SAT math scores were retained for the next stage of analyses, because they had significant correlations with the type of institution students attended in at least one of the two models.

Then, two-way contingency tables (cross-tabs) were generated to evaluate the statistical relationship between the type of institution a student attends and the discrete categorical variables included in this study. They were run to reduce the total number of variables to be included in the subsequent logit regression procedures to be used to predict community college attendance. All significant factors were retained and used for further analyses.

Twenty-seven academic categorical variables were identified during the cross-tabs analysis. Twenty of the 27 academic categorical variables were statistically significant at conventional levels; hence, they were retained for further analysis. Academic categorical variables considered for the crosstabs addressed the amount of credit students received for taking courses prior to entering their current institution, whether or not students had or needed tutoring

or remediation, the graduation status of students, the degree aspirations of students, the students' major, the enrollment status of the students, whether or not the students were accepted by their first college choice, and the type of high school the students attended. A list of these items is found in Table 3a. Whether or not a student had or needed tutoring or remediation in English,

Table 3a: Cross-Tab Results for Academic Categorical Variables Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)				
Variable	N	Pearson's Chi-Square	df	p-value
Prior credit for courses at current institution	16945	37.759***	1	0.000
Prior credit for course at other institutions	16946	1.633	1	0.201
Graduated from high school	17032	489.488***	1	0.000
Had tutoring or remediation in English	17188	11.423***	1	0.001
Had tutoring or remediation in reading	17188	12.604***	1	0.000
Had tutoring or remediation in mathematics	17188	1.705	1	0.192
Had tutoring or remediation in social studies	17188	12.734***	1	0.000
Had tutoring or remediation in science	17188	1.647	1	0.199
Had tutoring or remediation in foreign language	17188	0.038	1	0.846
Had tutoring or remediation in writing	17188	3.87*	1	0.049
Need tutoring or remediation in English	17188	5.119*	1	0.024
Need tutoring or remediation in reading	17188	7.277**	1	0.007
Need tutoring or remediation in mathematics	17188	4.216*	1	0.040
Need tutoring or remediation in social studies	17188	2.3	1	0.129
Need tutoring or remediation in science	17188	34.18***	1	0.000
Need tutoring or remediation in foreign language	17188	25.095***	1	0.000
Need tutoring or remediation in writing	17188	0.228	1	0.633
Highest degree expected at current institution	13700	902.694***	9	0.000
Highest degree expected	10164	5507.549***	9	0.000
Probable student major	15506	1116.568***	84	0.000
Student enrollment status	16856	Constant****		
Students accepted by first school choice	17088	62.948***	3	0.000
Type of high school attended	16828	263.496***	5	0.000
Time spent studying or doing homework	16482	111.368***	7	0.000
Time spent talking with teachers outside of class	16435	134.908***	7	0.000
Time spent doing volunteer work	16370	85.857***	7	0.000
Time spent involved with student clubs or groups	16332	263.534***	7	0.000
*Indicates the coefficient is statistically significant at .05 level. ** Indicates the coefficient is statistically significant at .01 level. *** Indicates the coefficient is statistically significant at .001 level. **** Chi-square was not generated because variable was constant.				

reading, social studies, writing, mathematics, science, and foreign language was merged to compute a single variable of tutoring and remediation to reduce the number of factors considered in later analyses.

A total of eight institutional categorical variables were identified during the cross-tabs analysis. The housing status of students, this college has a good academic reputation, this college has a good reputation for social activities, I was offered financial assistance by this college, the cost of attending this college, I was not offered aid by my first college, and this college's graduates get good jobs were all significant variables at the 0.05 p-level. These items were kept for further analyses as well (see Table 3b).

Forty-one background categorical variables were identified during this procedure. Thirty-three of the 41 background categorical variables were statistically significant at conventional levels. No significant relationships were found for native English speakers, for several race

Table 3b: Cross-Tab Results for Institutional Categorical Variables Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)				
Variable	N	Pearson's Chi-Square	df	p-value
Housing status of students	17092	2246.912***	5	0.000
This college has a good academic reputation	16304	263.613***	2	0.000
This college has a good reputation for social activities	16258	117.208***	2	0.000
Was offered financial assistance by this college	16212	8.327*	2	0.016
The cost of attending this college	16326	206.306***	2	0.000
Not offered aid by first choice	15938	57.213***	2	0.000
This college's graduates attend top graduate/professional schools	16045	5.253	2	0.072
This college's graduates get good jobs	15962	170.449***	2	0.000
*Indicates the coefficient is statistically significant at .05 level. ** Indicates the coefficient is statistically significant at .01 level. *** Indicates the coefficient is statistically significant at .001 level. **** Chi-square was not generated because variable was constant.				

Table 3c: Cross-Tab Results for Background Categorical Variables Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)				
Variable	N	Pearson's Chi-Square	df	p-value
Sex of students	17140	56.689***	1	0.000
Age of students	17045	461.505***	9	0.000
English native language	16921	0.215	1	0.643
Citizenship status	17100	12.517**	2	0.002
Parents' living status	16965	75.086***	2	0.000
Paying for college with family resources	14537	708.881***	5	0.000
Paying for college with my own resources	12596	147.183***	5	0.000
Paying for college with aid that need not be repaid	13292	487.894***	5	0.000
Paying for college with aid that must be repaid	12705	475.32***	5	0.000
Paying for college with resources other than above	6888	15.958**	5	0.007
Parental income last year	14865	280.559***	5	0.000
White/Caucasian	9859	8.164**	13	0.004
African American/Black	3600	2.951	1	0.086
American Indian/Alaskan Native	355	0.379	1	0.538
Asian American/Asian	1298	117.238***	1	0.000
Native Hawaiian/Pacific Islander	154	4.262*	1	0.039
Mexican American/Chicano	1181	80.802***	1	0.000
Puerto Rican	444	8.996**	1	0.003
Other Latino	927	0.017	1	0.896
Other	655	0.436	1	0.509
Father's highest education level	16404	128.733***	1	0.000
Mother's highest education level	16987	0.615	7	0.999
My parents wanted me to go to college	16864	51.693***	7	0.000
I could not find a job	16725	181.866***	2	0.000
Wanted to get away from home	16752	252.541***	2	0.000
To be able to get a better job	16776	51.426***	2	0.000
To gain a general education and appreciation of ideas	16796	0.273	2	0.873
There was nothing better to do	16598	7.996*	2	0.018
To make me a more cultured person	16779	77.366***	2	0.000
To be able to make more money	16689	41.392***	2	0.000
To learn more about things that interest me	16786	0.938	2	0.626
Probable careers of students	15299	845.653***	46	0.000
Time spent socializing with friends	16469	44.903***	7	0.000
Time spent exercising or playing sports	16453	178.258***	7	0.000
Time spent partying	16398	62.358***	7	0.000
Time spent working for pay	16416	35.738***	7	0.000
Financial concern of paying for college	16283	5.31	2	0.070
My relatives wanted me to come here	16283	65.015***	2	0.000
My teacher advised me to come here	16256	26.471***	2	0.000
High school counselor advised me	16201	33.256***	2	0.000
Private college counselor advised	16108	15.380***	2	0.000
*Indicates the coefficient is statistically significant at .05 level. ** Indicates the coefficient is statistically significant at .01 level. *** Indicates the coefficient is statistically significant at .001 level. ****Chi-square was not generated because variable was constant.				

variables including African Americans/Blacks, American Indians/Alaskan Natives, Other Latinos, and Others, for the mother's highest education level, for gaining a general education and appreciation of ideas, and for learning more about things that interest me. All other background categorical variables were significant; hence, they were retained for further analysis. See Table 3c for these outcomes. The different types of resources students use to pay for college was collapsed into a single variable that identified the type of aid received by students to attend community college. White students were compared against all nonwhite students in later analyses. As a result, all nonwhite students were identified as minority. Further, outcomes for nonminority status were interpreted from a minority student's status.

After that, several actions were taken to reduce the number of factors to be considered for the logit regression analyses. First, maximum likelihood factor analyses were run to determine the dimensionality of the items associated with the reasons students chose to go to college, the average amount of time students spent on certain tasks after school, and the reasons students decided to attend a particular institution. Next, scree tests were used to determine how many factors to use in the analyses. Then, the rotated solutions were interpreted to determine which items loaded on which factors.

Because the reasons students decided to attend college were unidimensional, only one interpretable factor loaded using the Varimax rotation procedure. This factor was responsible for explaining 24.94 percent of the item variance. Correlations between the reason items and the reason factor that were greater than .4 were used to create a composite variable score for each case (see Table 4). As a result, a composite score was computed for the reasons students chose to go to college based upon the outcomes for the students' parents wanting them to go to college, the fact

Table 4: Factor Analysis Results for Reasons Attending College
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)

Variables	Factor
	REASON
My parents wanted me to go (REASON01)	.455
I could not find a job (REASON02)	.402
Wanted to get away from home (REASON03)	.267
To be able to get a better job (REASON04)	.716
There was nothing better to do (REASON06)	.337
To make me a more cultured person (REASON07)	.366
To be able to make more money (REASON08)	.738

Note: The values in **bold** were used to create the REASONCOMB variable.

Table 5: Factor Analysis Results for Time Spent Outside Class
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)

Variables	Factors		
	ACADEMIC	SOCIAL	PAID
Time I spent studying or doing homework (HPW0501)	.539	-.043	-.431
Time I spent socializing with friends (HPW0502)	.087	.787	.117
Time I spent talking with teachers outside of class (HPW0503)	.659	.238	-.093
Time I spent exercising or playing sports (HPW0504)	.087	.693	-.274
Time spent partying (HPW0505)	-.052	.747	.285
Time spent working for pay (HPW0506)	.072	.082	.857
Time spent doing volunteer work (HPW0507)	.720	-.057	.157
Time spent involved with student clubs or groups (HPW0508)	.736	.025	.016

Note: The values in **bold** were used to create the ACADTIME, SOCIALTIME, and PAIDTIME variables.

that the student could not find a job, the fact that the students wanted to be able to get better jobs, and the fact that the students wanted to be able to make more money.

The scree plot for the average time students spent on activities after school indicated that the original hypothesis of unidimensionality was inaccurate. As a result, three factors were identified for these items from the rotated solutions: *average time spent on academic activities*, *average time spent on social activities*, and *average time spent working for pay* (see Table 5). The average time spent on academic activities factor accounted for 22.6 percent of the item variance, the average time spent on social activities accounted for 21.6 percent of the item variance, and the average time spent working for pay accounted for 14.05 percent of the item variance.

The reasons students chose to attend a particular college also were multidimensional. Hence, these items loaded on three factors: *choosing to attend a college because of advisement*, *choosing college to attend a college because of the college's reputation*, and *choosing to attend the college because the college offered or provided financial assistance* (see Table 6). The rotated solutions for these factors explained 19.88 percent, 17.19 percent, and 14.65 percent of item variance respectively. These factor solutions were used to create three new variables: *advised*, *collegerep*, and *financial*.

Following that, discrete variables with nominal values were recoded into new variables using dummy coding. The new variables were included in the regression analyses. The cases that met the conditions of the variable were given a value equal to "1" when the condition was met and "0" otherwise.

The type of high school the students attended, the first, second, or third school choice of the students, the year the students graduated from high school, where the students planned to live

during the school year, the status of the students' parents, whether or not the students had or needed tutoring and remediation in English, reading, mathematics, social studies science, foreign language, or writing, the type of aid students received or expected to receive to pay for college, the ethnic background of the students, the probable career of the students, the actual career of the

Table 6: Factor Analysis Results for Reasons Chose A Particular College Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
Variables	Factors		
	ADVISED	COLLEGEREP	FINANCIAL
CHOOSE - I chose this institution because...			
My relatives wanted me to come here (CHOOSE01)	.609	.114	.011
My teacher advised me (CHOOSE02)	.771	.163	.023
This college has a very good academic reputation (CHOOSE03)	.087	.845	.003
This college has a very good reputation for social activities (CHOOSE04)	.151	.719	.030
I was offered financial assistance (CHOOSE05)	-.008	.212	.753
The cost of attending this college (CHOOSE06)	.086	.065	.784
High school counselor advised me (CHOOSE07)	.717	.122	.150
Private college counselor advised me (CHOOSE08)	.661	.033	.152
I wanted to live near home (CHOOSE09)	.329	-.003	.277
Not offered aid by my first choice (CHOOSE10)	.342	-.102	.534
This college's graduates get good jobs (CHOOSE12)	.080	.738	.144
Note: The values in bold were used to create the ADVISED, COLLEGEREP, FINANCIAL variables.			

mother of the student, the actual career of the father of the students, and the students' major were recoded and assigned composite values were applicable. After recoding, 65 variables emerged from the initial set of 85 variables: 64 independent and one dependent. Of the 64 independent

variables, 18 were academic variables, 5 were institutional variables, and 41 were background characteristics.

Eighteen variables were included in the academic variables list after recoding. The average time per week spent on academic activities, majoring in arts and humanities, biological sciences, education, business, engineering, technology, physical sciences, professional fields, and social sciences, accepted by third college choice, graduated from high school, had or needed

Table 7a: Recoded Academic Variables List	
Variable Name	Brief Description
<i>Academic Variables</i>	
ACADTIME	Average time per week spent on academic activities
MAJORARTSHUM	Majoring in arts and humanities
MAJORBIOSCI	Majoring in biological sciences
MAJOREDUC	Majoring in education
MAJORBUS	Majoring in business
MAJORENGINE	Majoring in engineering
MAJORTECH	Majoring in technology
MAJORPHYSCI	Majoring in physical sciences
MAJORPROF	Majoring in professional fields
MAJORSOCSCI	Majoring in social sciences
THIRDCHOICE	Accepted by third college choice
SATM	Score on SAT Math
YGHSCOMB	Graduated from high school
TUTORREM	Had or needed some type of tutoring or remediation
DEGASP05	Highest planned degree
PUBLICHS	Attended a public high school
PREVCRED	Prior credit for courses at current institution
HIDEGHRE	Highest degree planned at this college
<i>Dependent Variable</i>	
NEW_INSTITUTION	Institution Type

some tutoring or remediation, and attended a public high school are the variables that were the recoded. SAT math scores, highest degree planned, prior credit for courses taken at current

institution, and highest degree planned at current institution remained unchanged. These variables are shown in Table 7a.

The institutional variables list was composed of five items after recoding. The recoded variables were chose to attend their college because of the college's reputation, chose to attend their college because of financial motivators, students lived in off-campus housing, and students were accepted by their third college choice. The variable for the number of miles the college is from the students' home remained the same. The recoded variables are included in Table 7b.

Table 7b: Recoded Institutional Variables List	
Variable Name	Brief Description
<i>Institutional Variables</i>	
COLLEGEREP	Chose to attend their college because of the college's reputation
FINANCIAL	Chose to attend their college because of financial motivators
DISTHOME	Miles college is from students' home
OFFCAMPUS	Student lived in off-campus housing
THIRDCHOICE	Students were accepted by their third choice of schools
<i>Dependent Variable</i>	
NEW_INSTITUTION	Institution Type

Forty-one background characteristic traits were identified after the recoding procedure. Thirty-nine of the 41 background characteristic variables were recoded for use during later analyses. The sex of the students and the age of the students were the only background characteristics that remain unchanged. All others were recoded from variables that were a part of the original data set. However, the variable for white students (nonminority) was interpreted in later analyses according to outcomes for nonwhite students (minority). Table 7c shows the entire list of background characteristics that emerged after recoding.

Following this procedure, six logit regressions were run to determine which academic and institutional variables impact community college enrollment and to determine how, if at all, background characteristics moderate students' decisions to attend community college. The first logit regression was run to see if there were any significant differences among academic and institutional variables. The second regression looked at background characteristics from the same perspective. Academic, institutional, and background factors that were statistically significant in the first two regression analyses were used to complete the third regression model to see if any significant relationships were present when they all were included in the same model. The fourth regression model was run to see if any significant differences existed among the variables that were statistically significant in regression test three as they were entered into latter models individually and as the academic and institutional variables interacted with the

Table 7c: Recoded Background Characteristics List	
Variable Name	Brief Description
<i>Background Characteristics</i>	
SEX	Sex of the students
AGE	Age of the students
CITIZENUS	Student is a U.S. citizen
PARSTATLIV	Parents are living together
AIDCOMB	Resources used to pay for college
INCOME	Parental income last year
NONMINORITY	White/Caucasian
FATHEDUC	Father's highest level of education
REASONCOMB	Reasons that influenced students' decision to attend college
CAREERARTS	Students' probable career in arts and humanities
CAREEREDUC	Students' probable career in education
CAREERENGINE	Students' probable career in engineering
CAREERPHYSICI	Students' probable career in arts and humanities
<i>Dependent Variable</i>	
NEW_INSTITUTION	Institution Type

Table 7c: Recoded Background Characteristics List (cont.)	
Variable Name	Brief Description
CAREERUNDEC	Students' probable career in physical sciences
CAREERUNEMP	Students' probable career undecided
CAREEROTHER	Students' unemployed
CAREERPROF	Students' probable career in other fields
CAREERBUS	Students' probable career in business
CAREERTECH	Students' probable career in technology
CAREERSOCSCI	Students' probable career in social sciences
FCAREERARTS	Father's career in arts and humanities
FCAREEREDUC	Father's career in education
FCAREERENGINE	Father's career in engineering
FCAREERPHYSCI	Father's career in arts and humanities
FCAREEROTHER	Father's unemployed
FCAREERPROF	Father's career in other fields
FCAREERBUS	Father's career in business
FCAREERTECH	Father's career in technology
MCAREERSOCSCI	Mother's career in social sciences
MCAREERARTS	Mother's career in arts and humanities
MCAREEREDUC	Mother's career in education
MCAREERENGINE	Mother's career in engineering
MCAREERPHYSCI	Mother's career in arts and humanities
MCAREEROTHER	Mother's unemployed
MCAREERPROF	Mother's career in other fields
MCAREERBUS	Mother's career in business
MCAREERTECH	Mother's career in technology
MCAREERSOCSCI	Mother's career in social sciences
SOCIALTIME	Average time per week spent on social activities
PAIDTIME	Average time per week spent on activities for pay
ADVISED	Chose to attend their college because of advisement
<i>Dependent Variable</i>	
NEW_INSTITUTION	Institution Type

background characteristics of students. The fifth regression analysis considered the academic, background, and interaction variables from the fourth model to determine if any variation existed

when institutional variables were removed from the former model. The sixth and final regression analysis looked at the institutional, background, and interactions variables to see if any differences would emerge with the academic variables removed from the model. The outcomes for these procedures are shared in the results of this study.

Summary

Data used in this study were gathered from the 2005 CIRP Freshman Survey. A sample of 17,188 respondents was generated for this study: 4,548 two-year students and 12,640 four-year students. The original data set consisted of 85 variables. After recoding, there were 65 variables including one dependent variable.

Several steps were taken to carry out this study. First, independent t-tests were conducted to see which continuous variables should be included in the regression analysis. Five continuous variables were identified for inclusion. Next, linear regressions were run on the five continuous variables identified from the t-tests to see if any differences existed among these variables. All significant variables were included in later procedures.

Following this, crosstabs were computed to assess the correlations between the categorical variables and the type of institutions students attended. All variables with significant correlations were retained as well. Maximum likelihood tests were conducted next using factor analysis procedures on the reasons students elected to go to college, the average time students spent on certain activities after school, and the reasons students chose to attend their current institution. Items with moderate to high correlations on the solutions that emerged after rotating the factors were used to create new variables to be used during later tests.

After this, discrete variables were recoded using dummy coding techniques to make analyses of these variables parsimonious. As a result, 18 academic variables, 5 institutional

variables, 41 background characteristic traits, and 1 dependent variable were created for the next series of tests. Finally, logistic regressions were computed to determine which academic and institutional variables impact community college attendance and to see how background characteristics moderate these variables throughout the process. The results are below.

Chapter 4

Results

The purpose of this study was to determine which academic and institutional factors impact students' decisions to attend community college as well as to see how background characteristics moderate those decisions. Data for this study were gathered from 17,188 students who completed the 2005 CIRP Freshman Survey. The dependent variable for this study was the type of institution students attended: *two-year* or *four-year* institutions. Since the dependent variable is discrete (categorical), the ordinary least squares regression (OLG) could be used to fit a linear likelihood model. However, because the linear likelihood model is heteroscedastic (generates differing variances due to the best line of fit and actual observations in data) and could predict probabilities beyond the range of (0, 1), logistic regression was used to estimate the factors that influence community college attendance.

Log-odds were produced to answer the following research questions for the study: 1. Nationally, what academic and/or institutional factors influence students' choices to attend a two-year college? 2. Nationally, how, if at all, do background characteristics moderate academic and/or institutional factors among community college choice? Log-odds measure the effect size of two binary data values by describing the strength of association or dependence of the two values. Essentially, it describes the odds of an event occurring in one group and not occurring in another. Considering this, a logit regression was run to see which academic and institutional factors impact college choice. Five additional regressions also were run to determine the effect

that background characteristics have on academic and institutional variables. Odds ratios (log-odds) were used to explain the outcomes from these procedures.

Several hypotheses were tested to answer the research questions for this study. The first research hypothesis looked at which academic and institutional factors help predict college choice. Research hypothesis two examined how background characteristics influence community college attendance. The third hypothesis considered how background, academic, and institutional factors inspire community college choice. Research hypothesis four investigated how background characteristics moderate academic and institutional factors relative to predicting community college attendance. The fifth research hypothesis explored the manner in which background characteristics moderate academic factors in regard to college choice. Research hypothesis six assessed how background characteristics moderate institutional factors in regard to attending community college. The results are below.

Odds Ratios for Research Question 1

The first analysis examined the academic and institutional factors associated with community college attendance and program enrollment. This model was statistically significant at conventional levels ($\chi^2(22)=778.88$, $p>.001$). It predicted 87.7 percent of the responses correctly. Considering these outcomes, the null hypothesis was rejected. See Table 8 for these outcomes.

The results for the highest degree expected by a student, SAT math scores, biological science majors, engineering majors, professional majors, technology majors, the highest degree expected by students at a particular institution, tutoring and remediation, the housing status of a student, the reputation of a college, and the financial support provided by or received from an institution were statistically significant (see Table 8). The factor for predicting community

Table 8: Logistic Regression Results for Model 1
(Academic and Institutional Variables)
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)

	Exp	df	Sig.
Academic Variables			
Highest degree at current institution	4.151***	1	.000
Had or needed tutoring or remediation	1.590***	1	.000
SAT mathematics score	1.005***	1	.000
Major in technology	.304**	1	.004
Major in professional field	.572**	1	.009
Major in biological sciences	2.435*	1	.013
Highest degree planned	1.114*	1	.034
Major in engineering	.614*	1	.042
Attended public high schools	.724	1	.057
Major in social sciences	1.468	1	.117
Major in education	1.351	1	.282
Average time per week spent on academic activities	1.017	1	.283
Major in physical science	1.416	1	.386
Accepted by third school choice	1.108	1	.637
Prior credit for courses taken at current institutions	.899	1	.721
Major in arts and humanities	1.019	1	.931
Major in business	1.016	1	.936
Graduated from high school	.000	1	.999
Institutional Variables			
Living status of students	.497***	1	.000
Attended college because of college reputation	1.113***	1	.000
Attended college because of financial motivators	.924***	1	.001
Miles students live from college	.942	1	.228
Students accepted by third college choice	1.108	1	.637
Constant	1.424E7	1	.999
Model Chi-Square [df, p-value]	778.880[22, p.>.001]		
% Correct Predictions	87.7%		
*Indicates the coefficient is statistically significant at .05 level.			
** Indicates the coefficient is statistically significant at .01 level.			
*** Indicates the coefficient is statistically significant at .001 level.			

college enrollment over enrollment to a four-year institution was 1.114 for the highest degree expected by a student. The likelihood of community college predictions is almost even when SAT math scores are considered (Exp=1.005). Biological science majors are nearly two-and-one half times more likely to attend community college than they are to attend a four-year institution (Exp=2.435).

With every one unit increase, the likelihood of enrolling in a community college decreases by almost 39 percent, almost 50 percent, and almost 70 percent for engineering, professional, and technology majors, respectively. The highest degree a student intends to receive at their current institution also is a good predictor of community college attendance. For each increase in the highest degree expected at the students' current institution, the likelihood of attending a community college is four times greater than not attending (Exp=4.151). The likelihood of attending a community college increases more than one-and-one half times when respondents identify themselves as having had or needing tutoring or remediation (Exp=1.590).

Students who live off-campus are 50 percent less likely to attend a community college than are students who live on campus. The odds of enrolling in a two-year institution are marginal when considering the reputation of the college (Exp=1.113) or the financial assistance received for attending a particular institution (Exp=.924). Tutoring and remediation (Exp=1.590), biological science majors (Exp=2.435), and the highest degree expected at a particular institution by a student (Exp=4.151) are the best predictors of community college attendance when academic and institutional factors are considered (see Table 8).

Odds Ratios for Research Question 2

The second analysis examined the predictive nature of background characteristics relative to community college attendance. The omnibus test was statistically significant ($\chi^2(41)=717.348$,

p>.001) suggesting that the background characteristics of students increase the predictive nature of community college enrollment. This model predicted 78.3 percent of the responses correctly. As a result, the sex of a student, the income of the students' parents, the mother's professional career, the financial support students receive for school, the ethnic background of students, the reasons students attended college, the time spent participating in social activities after school, and the advice received to attend college all were significant (see Table 9).

Minority students were more likely to attend a two-year institution compared to nonminority students as the odds of them attending a two-year institution increased by more than 13 percent for every one unit increase. The gender of a student decreased the odds of attending community college by almost 30 percent for females. The odds of attending community college (or not) are marginal when the income of the parents of students ($\text{Exp}=1.076$), the time spent with social activities while in high school ($\text{Exp}=1.024$), and receiving advice to attend college ($\text{Exp}=.959$) were used to predict community college attendance. The likelihood of attending community college decreased by almost 38 percent and almost 5 percent, respectively, when the mother's professional career and the advice students received to attend college were considered.

A third logit regression was run to predict enrollment to a two-year college on the factors that were found statistically significant in the previous regressions analyses. The test for the third analysis indicated that the overall model is statistically significant ($\chi^2(19)=320.596$, $p>.001$) and that it predicted 86 percent of the responses correctly. SAT math scores, professional majors, technology majors, the highest degree expected by a student at their current institution, whether or not a student had or needed tutoring or remediation, the aid support students use to pay for college, the housing status of students, the financial assistance students received for attending a

**Table 9: Logistic Regression Results for Model 1
(Background Characteristic Variables)**

Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)

	Exp	df	Sig.
Parental income last year	1.076***	1	.000
Aid used to pay for college	1.197***	1	.000
Nonminority status	.490***	1	.000
Reasons for attending college	.863***	1	.000
Sex of the students	.703***	1	.000
Mother's career in professional field	.622**	1	.006
Advised to attend a particular institution	.959**	1	.007
Age of the students	.907	1	.060
Mother's career in education	.716	1	.066
Father's career in engineering	.674	1	.088
Mother's career is in business	.799	1	.146
Students' probable career in technology	.364	1	.159
Father's career in other field	.786	1	.203
Father's career in arts and humanities	.710	1	.294
Father's career in technology	.824	1	.324
Father's career in social science	.720	1	.337
Student status is U.S. citizen	1.184	1	.343
Parents living status	1.076	1	.378
Students' probable career in physical science	2.019	1	.385
Mother's career in arts and humanities	1.392	1	.389
Students' probable career in other field	.546	1	.391
Mother's career in technology	.862	1	.407
Mother's career in engineering	.668	1	.451
Father's career in education	.815	1	.478
Model Chi-Square [df, p-value]	717.348 [41, p.>.001]		
% Correct Predictions	78.3%		
*Indicates the coefficient is statistically significant at .05 level.			
** Indicates the coefficient is statistically significant at .01 level.			
*** Indicates the coefficient is statistically significant at .001 level.			

Table 9: Logistic Regression Results for Model 1 (cont.) (Background Characteristic Variables)			
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
Variable	Exp	df	Sig.
Students' probable career in social sciences	1.569	1	.535
Father's highest degree of education	1.010	1	.671
Students' probable career in professional field	.742	1	.672
Average time spent on paid activities	1.006	1	.693
Mother's career in physical science	.753	1	.714
Students' probable career in arts and humanities	.784	1	.732
Mother's career in social science	.922	1	.757
Father's career in professional field	.939	1	.803
Father's career in physical science	1.093	1	.902
Students' probable career in engineering	.933	1	.923
Students' probable career in business	.941	1	.931
Mother's career in other field	.991	1	.950
Students' probable career in undecided	.967	1	.962
Students' probable career in education	.977	1	.974
Father's career in business	.999	1	.994
Students' probable career in unemployed	.998	1	.998
Model Chi-Square [df, p-value]	717.348 [41, p.>.001]		
% Correct Predictions	78.3%		
*Indicates the coefficient is statistically significant at .05 level.			
** Indicates the coefficient is statistically significant at .01 level.			
*** Indicates the coefficient is statistically significant at .001 level.			

particular institution, and the race and ethnicity of a student were all statistically significant (see Table 10).

The odds of predicting community college attendance were diminutive for SAT math scores (Exp=1.004), the resources students use to pay for college (Exp=1.110), and the financial assistance students received for attending a particular institution (Exp=.918). However, the odds

**Table 10: Logistic Regression Results for Model 1
(Academic, Institutional, and Background Characteristic Variables)**

Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)

	Exp	df	Sig.
Academic Variables			
Highest degree at current institution	2.811***	1	.000
SAT mathematic scores	1.004***	1	.000
Had or needed tutoring or remediation	1.579*	1	.020
Major in technology	.244*	1	.026
Major in professional field	.591*	1	.033
Highest degree expected	1.113	1	.136
Major in biological sciences	2.095	1	.152
Major in engineering	.856	1	.610
Institutional Variables			
Housing status of students	.456***	1	.000
Financial motivators to attend particular college	.918*	1	.026
Background Characteristics			
Aid to pay for college	1.110***	1	.000
Nonminority status	.339***	1	.000
Age of students	1.353	1	.093
Average time spent on social activities	1.038	1	.108
Reasons for attending college	.914	1	.124
Mother's career in professional field	.728	1	.252
Parents income last year	1.030	1	.331
Sex of student	1.051	1	.791
Advised to attend current institution	1.000	1	.996
Constant	.003	1	.000
Model Chi-Square [df, p-value]	320.596 [19, p.>.001]		
% Correct Predictions	86%		
*Indicates the coefficient is statistically significant at .05 level.			
** Indicates the coefficient is statistically significant at .01 level.			
*** Indicates the coefficient is statistically significant at .001 level.			

of attending community college are greatly reduced when considering professional majors (Exp=.591), technology majors (Exp=.244), and the housing status of students (Exp=.456). On the other hand, the likelihood of attending community college increased for minority students by more than 65 percent when the outcome for nonminority status (Exp=.339) was considered.

Students who had or needed tutoring or remediation were more than one-and-one half times likely to attend community college than not (Exp=1.579). The factor for the highest degree a student expected to receive at their current institution was 2.811. That is, the odds of choosing to attend community college are almost three times as great as the decision to attend a four-year institution for students who expected to receive a degree at their current institution.

Based upon these analyses, SAT math scores, professional majors, technology majors, the highest degree a student expected to receive at a particular institution, living off-campus, whether or not a student had or needed tutoring or remediation, and the financial assistance given to a student by their current institution significantly impacted community college choice. These factors are good predictors of community college attendance when background characteristics are present. Further in this light, the prevalence of academic factors relative to predicting community college attendance exceeds that of institutional factors when background characteristics are present, which could suggest that academic factors are better predictors of community college enrollment. More tests were required to see if this theory would prevail.

To test the second hypothesis as to how background characteristics moderate academic and institutional variables, several other logit regressions were generated. The chi-square (430.302) at 23 degrees of freedom with a p-value less than .001 in the fourth test told us that this model as a whole fits much better than the empty model when the interactions between background characteristics and academic and institutional factors were considered. This model

predicted 87.3 percent of the responses correctly as compared to 82.5 percent correct responses in the model without background characteristics (see Table 11).

Professional majors, the highest degree expected by a student at their current institution, the housing status of a student, the race and ethnicity of a student, the aid support students use to pay for college combined with the housing status of students, and the race and ethnicity of a student combined with the housing status of students were statistically significant. The odds of predicting community college attendance increased by a factor of 2.049 and 1.101, respectively, for every one unit increase in the highest degree a student expected at their current institution and the aid support students use to pay for college combined with the housing status of students. Every one unit increase also improved the odds of minority students attending community college by more than 95 percent compared to nonminority students. For every one unit increase, the likelihood of attending a two-year institution decreased by 66 percent for students who majored in professional fields and by 89.6 percent for students who lived off-campus. Minority students were more than two times as likely not to attend community college when the race and ethnicity of a student combined with their housing status is used as a predictor ($\text{Exp} = 2.283$).

As it stands, the items listed above seem to be the best predictors of community college attendance when background characteristics interact with academic and institutional factors; at least, as far as statistical significance is concerned. However, the interactions between the background characteristics of students (resources used to pay for college and race and ethnicity) and the academic and institutional factors used to predict college attendance (SAT math scores, professional majors, technology majors, the highest degree expected at a particular institution, the housing status of students, tutoring and remediation, and aid support for college) are not statistically significant. Conversely, the housing status of students is the only factor that interacts

significantly with the resources students use to pay for college and the race and ethnicity of a student.

These outcomes are of particular interest considering that the odds ratio for the race and ethnicity of a student (Exp=.048) and the housing status of students (Exp=.104) changes significantly when the race and ethnicity of a student interacts with the housing status of students (Exp=2.283). That is, minority students are more than two times less likely to attend community college when the race and ethnicity of a student and the housing status for students interact. The interaction between the aid support students use to pay for school and the housing status of students is less impressive. These outcomes suggest that background variables have more influence over institutional variables compared to academic factors when the race and ethnicity of a student and the housing status of students are considered. Two additional logit regressions were run to test the validity of this theory.

Table 11: Logistic Regression Results for Model 1 (Academic, Institutional, Background Characteristic, and Interaction Variables)			
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
	Exp	df	Sig.
Academic Variables			
Highest degree expected at current institution	2.049***	1	.001
Major in professional field	.340*	1	.049
SAT mathematic scores	1.003	1	.098
Had or needed tutoring or remediation	1.685	1	.198
Major in technology	.725	1	.832
Model Chi-Square [df, p-value]	430.302 [23, p.>.001]		
% Correct Predictions	87.3%		
*Indicates the coefficient is statistically significant at .05 level.			
** Indicates the coefficient is statistically significant at .01 level.			
*** Indicates the coefficient is statistically significant at .001 level.			

Table 11: Logistic Regression Results for Model 1 (cont.)
(Academic, Institutional, Background Characteristic, and Interaction Variables)
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)

	Exp	df	Sig.
Institutional Variables			
Housing status of students	.104***	1	.000
Financial motivators to attend particular college	.943	1	.465
Background Characteristics			
Aid used to pay for college	1.010	1	.942
Nonminority status	.048*	1	.021
Academic Interaction Variables			
Interaction of nonminority and technology majors	.199	1	.167
Interaction of aid and professional majors	1.058	1	.262
Interaction of nonminority and SAT mathematics	1.002	1	.304
Interaction of aid and highest degree	1.019	1	.347
Interaction of nonminority and highest degree	1.186	1	.362
Interaction of nonminority and tutor/remediation	1.244	1	.538
Interaction of aid and tutor/remediation	.980	1	.591
Interaction of nonminority and professional majors	.871	1	.752
Interaction of aid and technology majors	.985	1	.883
Interaction of aid and SAT mathematics	1.000	1	.927
Institutional Interaction Variables			
Interaction of nonminority and housing status	2.283*	1	.020
Interaction of aid and housing status	1.101*	1	.024
Interaction of aid and financial motivators	.994	1	.397
Interaction of nonminority and financial motivators	1.010	1	.887
Constant	.105	1	.152
Model Chi-Square [df, p-value]	430.302 [23, p.>.001]		
% Correct Predictions	87.3%		
*Indicates the coefficient is statistically significant at .05 level.			
** Indicates the coefficient is statistically significant at .01 level.			
*** Indicates the coefficient is statistically significant at .001 level.			

Table 12: Logistic Regression Results for Model 1 (Academic, Background, and Interaction Variables)			
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
	Exp	df	Sig.
Academic Variables			
Highest degree expected at current institution	2.585***	1	.000
SAT math scores	1.007***	1	.001
Had or needed tutoring or remediation	2.008	1	.084
Professional majors	.483	1	.154
Technology majors	1.228	1	.882
Background Characteristics			
Aid to pay for college	1.231	1	.126
Nonminority status	.177	1	.149
Academic Interaction Variables			
Interaction of nonminority and technology majors	.149	1	.084
Interaction of nonminority and highest degree	1.219	1	.288
Interaction of aid and Sat math scores	1.000	1	.323
Interaction of aid and professional majors	1.033	1	.507
Interaction of aid and tutor/remediation	.981	1	.607
Interaction of nonminority and professional majors	.822	1	.633
Interaction of nonminority and SAT math scores	1.001	1	.690
Interaction of aid and highest degree	.999	1	.977
Interaction of nonminority and SAT math scores	1.001	1	.690
Interactions of aid and technology majors	.965	1	.730
Interaction of nonminority and tutor/remediation	1.055	1	.872
Constant	.001	1	.000
Model Chi-Square [df, p-value]	390.349 [17, p.>.001]		
% Correct Predictions	85.7%		
*Indicates the coefficient is statistically significant at .05 level. ** Indicates the coefficient is statistically significant at .01 level. *** Indicates the coefficient is statistically significant at .001 level.			

The fifth regression analysis was designed to test the influence that background characteristics have over academic factors when they interact without the presence of institutional factors and to test the theoretical premise that suggests that background

characteristics have greater influence over the predictive nature of institutional variables compared to the influence they have over academic variables. This analysis used only the background characteristics and academic variables associated with community college attendance and program enrollment (see Table 12). The analysis of this model was statistically significant ($\chi^2(17)=390.349$, $p>.001$). It predicted 85.7 percent of the responses correctly.

Removing the institutional factors from the previous model affected the level of significance for SAT math scores and professional majors. The other factors were unaffected (see Table 12). This slight modification in the previous model (removing all institutional variables from the academic, institutional, background, and interaction model) increased the significance level of SAT math scores ($\text{Exp}=1.007$, $p=.001$) as SAT math scores were not statistically significant in the previous model ($\text{Exp}=1.003$, $p=.098$). The change for professional majors was exactly opposite. That is, professional majors were statistically significant in the previous model ($\text{Exp}=.340$, $p=.049$), although barely, and were not significant in the model with institutional factors removed ($\text{Exp}=.483$, $p=.154$). The odds ratios were not significant when the academic factors included in this model interact with the aid support students use to pay for college and the race and ethnicity of students.

The highest degree a student expected to receive at a particular institution ($\text{Exp}=2.585$) also was statistically significant at $p\geq.001$ (see Table 12). However, it was not significant when it interacted with the aid support students use to pay for college and the race and ethnicity of students. These outcomes suggest that the affect background characteristics have on academic factors is small, which suggests that institutional factors seem to impact community college attendance more significantly than academic factors when background characteristics interact with these factors. A sixth analysis was conducted to investigate this inference.

The sixth regression analysis was run to see how background characteristics affect institutional factors relative to predicting enrollment to a two-year college. The omnibus test indicated that the overall model was statistically significant ($\chi^2(8)=1348.432$, $p>.001$). This model predicted 78.9 percent of the responses correctly (see Table 13).

Table 13: Logistic Regression Results for Model 1 (Institutional, Background, and Interaction Variables)			
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)			
	Exp	df	Sig.
Institutional Variables			
Housing status of students	.048***	1	.000
Financial motivators to attend	.918**	1	.007
Background Characteristics			
Nonminority status	.507***	1	.000
Aid to pay for college	1.051***	1	.001
Institutional Interaction Variables			
Interaction of nonminority and housing status	2.052***	1	.000
Interaction of aid and housing status	1.149***	1	.000
Interaction of nonminority and financial motivators	.944*	1	.038
Interaction of aid and financial motivators	1.005	1	.099
Constant	6.997***	1	.000
Model Chi-Square [df, p-value]	1348.432 [8, p>.001]		
% Correct Predictions	78.9%		
*Indicates the coefficient is statistically significant at .05 level. ** Indicates the coefficient is statistically significant at .01 level. *** Indicates the coefficient is statistically significant at .001 level.			

Every one unit increase in the aid support students use to pay for college and the aid support students use to pay for college combined with the housing status of students increased the likelihood of a student attending community college by a factor of 1.051 and 1.149, in that order. The odds of attending a two-year institution also increased by more than 49 percent for minority students with every one unit increase of the race and ethnicity of a student and by

almost 6 percent for minority students with a one unit increase of the race and ethnicity of a student combined with the financial assistance a student received for attending a particular college was considered. Under the same conditions, the housing status of students and the financial assistance a student received for attending a particular institution decreased the odds of attending community college (versus attending a four-year institution) by a factor of .048 and .918, respectively. The likelihood of minority students who lived off-campus attending a two-year institution was reduced by a factor of 2.052 when the race and ethnicity of a student was combined with the housing status of students. These findings suggest that the affect background characteristics have on institutional factors excluding academic factors is larger than the affect they have on academic factors standing alone. These and other findings will be discussed at length in the following chapter.

Chapter 5

Discussion

Introduction

The purpose of this study was to determine which factors impact students' decisions to attend community college. The data were analyzed to determine which academic and institutional factors successfully predicted community college attendance and to determine how, if at all, background characteristics moderated academic and institutional factors. The results uncovered several significant relationships among the factors used to assess community college enrollment.

Multiple regression analyses were employed to determine how different combinations of predictor variables would impact community college choice. In particular, six models were generated to see which academic, institutional, and background factors influence community college attendance. Regression models that controlled for academic factors typically demonstrated the ability to predict community college attendance more accurately than models that included institutional factors and background characteristics absent academic factors. More specifically, models that included academic factors served as better predictors of community college attendance, because they predicted higher percentages of students who would attend community college correctly compared to models that excluded academic factors. However, regression models that controlled for institutional factors, generally, produced the most statistically significant odds ratios.

Considering this, it can be concluded that the standardized math scores of students, the degree aspirations of students, students who major in professional fields, the housing arrangements for students, the financial assistance received by a student from a particular institution, the race and ethnicity of a student, and the resources used to pay for college by a student greatly influence a student's decision to attend community college. It also can be concluded that the race and ethnicity of a student interacting with the housing status of students, the race and ethnicity of a student interacting with the financial assistance provided by the current institution of a student, and the aid used to pay for college by a student moderating the housing status of students are significant predictors of community college choice as well. Further, it was evident throughout this study that no one predictor variable impacted community college attendance as much as the predictor that considered where students lived when they attended college (see Table 14). This predictor was significant in several models.

It also can be construed that the effect background characteristics have on academic and institutional factors is diminutive. Meaning that, a statistically significant effect was present when background characteristics were included in the models, even though the effect was not extremely noticeable except when the resources students used to pay for college and the race and ethnicity of a student interacted with the housing status of students respectively. The findings for each regression model are discussed below.

Academic and Institutional Variables

To find out which academic and/or institutional factors influence students' choices to attend two-year colleges, it was hypothesized that significant relationships would not exist among academic and institutional variables. This theory was investigated by regressing the type of institution a student attends against 17 academic variables and 5 institutional variables (see Table 8) using the

Model Chi-square statistic. The hypothesis for this model was rejected (Model Chi-square = 778.880(22), $p > .001$), because the logit regression revealed significant differences among the academic and institutional factors in this model. Positive relationships were discovered relative to attending community college for the degree aspirations of students, for SAT math scores, for students who were biological science majors, for the highest degree expected by a student at a particular institution, for students who had or needed tutoring and remediation, and for the reputation of a college. Associations for engineering majors, professional majors, technology majors, the housing status of students, and the financial support provided by a particular institution for students were negative, even though they were statistically significant.

Table 14: Factors That Impact Community College Choice (Statistically Significant Academic, Institutional, Background, and Interaction Factors) Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)	
<i>Academic Factors</i>	
Highest degree expected at current institution	
Major in professional field	
SAT math scores	
<i>Institutional Factors</i>	
Housing arrangements for students	
Financial assistance received from current institution	
<i>Background characteristics</i>	
Nonminority status	
Aid used to pay for college	
<i>Institutional Interactions with Background Characteristics</i>	
Interaction of nonminority and housing status	
Interaction of aid and housing status	
Interaction of nonminority and financial assistance	

These correlations suggest that academic and institutional factors associated with degree aspirations, student readiness, and institutional climate serve as good predictors of community

college attendance. Academic variables related to degree aspirations seem to be the best predictors of community college choice, even though student readiness variables are good predictors as well. Institutional factors that represent the climate of an institution also are good predictors of students' decisions to attend community college. For the most part, these findings show that academic factors seem to be better predictors of community college attendance as compared to institutional factors.

These results sustain Alfonso's (2006) baccalaureate attainment theory which suggests that the likelihood of receiving a bachelor's degree increases when controlling for educational expectations, but decreases when students attend community college. Hence, students who are aware of this phenomenon are less likely to attend a two-year institution if they desire to receive a bachelor's degree. Another study concluded that the relationship between student degree completion and institutional graduation rates is positive; however, the relationship between the two is adversely affected when the proportion of minority student enrollments is large (Goble, Rosenbaum, & Stephan, 2008). Goble, Rosenbaum, & Stephan's findings may suggest that minority students are the reason why the likelihood of students receiving a bachelor's degree is reduced for students who attend community college considering that community colleges enroll higher numbers of minority students compared to four-year institutions (Orr, 2001).

Concerning institutional factors, Kisker and Oulcalt (2005) and Goble et al. (2008) found evidence that indicated that the dynamics of the faculty as well as the location and size of the institution affect the graduation rates of community college students. Orr (2001) discovered in a study concerning recruitment barriers faced by two-year institutions that institutions with chief student affairs officers visibly present positively influenced the recruitment of minority students. These studies suggest the faculty and staff of an institution are vitally important to their

recruitment efforts as well as their graduation rates. These studies show that the current study is aligned with past research.

Background Variables

Several series of tests were conducted to see how the background characteristics of students affect their decisions to attend two-year colleges. During the first step to find out how background characteristics moderate academic and institutional factors, it was hypothesized that significant relationships would not exist among background variables relative to predicting enrollment to community college. To test this theory, the type of institution a student attends was regressed against 41 background variables (see Table 9). Statistical results disconfirmed the research hypothesis for this model by showing a strong relationship between the type of institution students attend and the background variables included in this regression model at the 0.001 level. A moderate association was present among the family income of students, the time students spent participating in social activities, and the time students spent working for pay. A negative relationship existed for the gender of a student, for the age of a student, for students' mothers with professional careers, for the race and ethnicity of students, for the reasons students attend college, and for students advised to attend a particular institution.

These findings keep in line with earlier research that has shown a strong link between family income and community college attendance (Bers & "Galowich, 2002; Francis & Morning, 1993; Lee et al., 2004; Townsend, 2007; Usher, 2004). That is, the current study shows that the likelihood of attending community college is increased when family income is considered. Other research is contradicted by this study in regard to career advancement. For instance, Nomi (2005) found evidence that some students attend community college to advance their careers. While, Santos (2004) found that many students attend community college to prepare for future careers.

In this light, the current study suggests exactly the opposite. That is, the likelihood of predicting community college attendance is decreased when career advancement and career preparation are considered as reasons students attend community college. More research is needed to find out why this finding goes against past research.

Academic, Institutional, and Background Characteristic Variables

A second step was taken to find out how background characteristics moderate academic and institutional factors. Research hypothesis three stated that there are no significant relationships between academic, institutional, and background variables relative to predicting community college attendance. To test this hypothesis, the type of institution a student attends was regressed against eight academic variables, two institutional variables, and nine background variables (see Table 10) using the Model Chi-square statistic. The research hypothesis was rejected for this analysis, because the chi-square statistic (3320.596(9), $p > .001$) was statistically significant. As a result, the odds of predicting community college attendance were increased when considering SAT math scores, the aid students used to pay for college, whether or not students had or needed tutoring or remediation, and the highest degree a student expected to receive at a particular institution. The odds of community college choice decreased for students who were professional majors, for students who were technology majors, for the housing status of students, for the race and ethnicity of a student, and for the financial assistance students received from a particular institution.

Associations found among academic factors such as SAT math scores, students having had or needing tutoring or remediation, and the highest degree expected by a student at a particular institution are other ways of looking at issues of student readiness and the probability of academic success in postsecondary education. Student readiness, in this case, refers to the

academic skills and abilities required of students to meet the basic requirements of postsecondary education. The probability of academic success refers to the likelihood of academic achievement of a student at a postsecondary institution.

Considering this, students attend community college to take remedial courses and to complete prerequisites needed to enroll at four-year institutions (Byrd & MacDonald, 2005). As well, students enter postsecondary institutions underprepared, because they lack the proper academic skills and abilities required for academic success (Inman & Mayes, 1999). Further, students take remedial courses to improve their academic skills and abilities and they take courses to give themselves the tools required to enroll, succeed, and persist at four-year institutions (Grimes & David, 1999).

Traditionally, community colleges enroll more than half of the students who enter postsecondary institutions. They also enroll more students who are underprepared. As a result, more than half of these students have to take remedial courses (Moss & Young, 1995). Considering this, the incidence of students taking remedial courses may be attributed to the fact that the reading, writing, and math skills of nearly 41 percent of all first-year community college students are lacking (Byrd & MacDonald, 2005).

In regard to the institutional factors examined in this analysis, a negative relationship existed between the housing status of students and the financial assistance they received from an institution. That is, they predicted the likelihood of not attending community college rather than attending. The outcome for the financial assistance received by a student from an institution may be associated with several factors. One reason for this result may be due to the fact that the students attending community college did not receive financial assistance from their first choice and, in turn, was offered aid by their current institution through their tuition assistance program.

Tuition assistance programs have been great incentives for students attending community college (Rifkin & McKinney, 1996). Colleges that offer tuition assistance programs are really attractive to low-income students.

Another reason students may have attended community college is the cost associated with attending their current college. Tuition affordability has been attractive to students who desire to attend two-year institutions for some time now (Lee et al., 2004). That is, community college tuition, generally, is more affordable than tuition at four-year institutions (Townsend, 2007). This aspect of community colleges, among others, may attract students because higher education costs have increased over time, which, in turn, has forced students to attend college at more affordable institutions (Advisory Committee on Student Financial Aid, 2001). These are important findings, because the financial resources students use to pay for college, in many cases, help determine the type of institution a student attends, if they attend at all.

When background traits were included in the regression model with academic and institutional variables and they did not interact, negative associations remained intact for the institutional variables, suggesting that the influence background traits have on institutional factors is nominal. The effect that the background characteristics of students had on academic variables under the same conditions as the institutional factors also was small. These findings suggest that the effect of background characteristics on academic and institutional factors is not significant when they do not interact. However, further analyses were required to understand the relationship between these factors when they do interact.

Academic, Institutional, Background, and Interaction Variables

Research hypothesis four proposed that no significant relationships existed between academic, institutional, and background variables when they interact relative to predicting

community college enrollment. To test this hypothesis, the type of institution a student attends was regressed against five academic factors, two institutional factors, two background characteristics, and fourteen interaction variables (see Table 11). Statistical results for this model disconfirmed the research hypothesis.

Positive associations existed among the degree aspirations of students relative to their current institution, among the interaction between the resources students used to pay for college and the housing status of students, and among the interaction between the race and the housing status of students. As it stands, the degree aspirations of students are good predictors of community college attendance as long as they do not interact with any background characteristics. However, when they do interact, the predictive value of the degree aspirations of students is decreased. This finding suggests that the degree aspirations of students in regard to predicting community college attendance is adversely affected when a student is a minority as well as when the financial resources students use to pay for college are considered.

The findings relative to the resources used to pay for college contradict existing research. For instance, Cofers and Somer (2001) discovered that financial aid, including unsubsidized loans, positively affects student persistence (or degree aspirations in this case). The opposite is true in the current study as the aid students use to pay for college negatively impacts community college predictions when they interact with the degree aspirations of students. These differences in findings indicate that other latent factors may be present.

The likelihood of predicting community college attendance is reduced significantly for professional majors and the housing status of students when they do not interact with background characteristics. It is also reduced when the race and ethnicity of students is used as a predictor. However, professional majors, as predictors of community college choice, lose their predictive

efficiency when they interact with the background traits of students. This outcome suggests that the affect background characteristics have on professional majors is marginal. On the other hand, the interactions between the housing status of students and the background characteristics of students are significant. That is, the affect that the resources a student uses to pay for college and the race and ethnicity of a student have on the housing status of students is profound as the predictive value for these interactions improved markedly.

The affect that these background characteristics have on the housing status of students may due to the fact that underrepresented minority groups attend community college more often than whites (Rendon, 1993). Pope (2002) also stated that community colleges are really attractive to minority students, especially, in the cases of African Americans, Hispanics, and Native Americans. In the case of Hispanics, Santos (2004) noted that Hispanics attend community college for self-improvement, to learn about their community, and to acquire marketable skills that lead to careers instead of jobs. Other minority students attend for reasons such as reduced tuition rates, academic remediation, and to fulfill the prerequisite requirements of four-year institutions (Rendon, 1993).

Academic, Background, and Interaction Variables

Further analyses were conducted to see how background characteristics affect academic factors used to predict community college choice with institutional factors removed from the model. Research hypothesis five suggested that significant relationships would not exist among academic, background, and interaction factors. This hypothesis was tested by regressing the type of institution a student attends against five academic attributes, two background traits, and ten interaction combinations (see Table 12) using the Model Chi-square statistic. Again, the research hypothesis was rejected (Model Chi-square = 3320.596(9), $p > .001$). Significant relationships

were discovered only for SAT math scores and the highest degree a student expected at a particular institution. All other factors were not significant, including the background characteristics and their interactions.

It appears that student readiness is a valuable predictor of community college choice in regard to SAT math scores and the highest degree a student expects to receive at a particular institution. The present study shows that students are more likely to attend community college if their SAT math scores and the highest degree they expect to achieve at their current institution are considered. However, when these factors interact with the resources students use to pay for college and the race and ethnicity of the students, their predictive efficiency is reduced considerably in regard to their statistical significance. These findings propose that background characteristics have an adverse affect on academic factors when they interact; however, the presence of background traits is hardly noticeable when these interactions do not take place.

These results are supported by the study Lanaan (2003) conducted concerning the degree aspirations of students who attended two-year colleges. He discovered that 33 percent of the students surveyed aspired to attain an associate's degree, while 25 percent had aspirations of attaining a bachelor's and/or master's degree. His study suggested that students who attend two-year colleges have intentions of attending four-year institutions regardless of their ethnic background.

To some extent, a study conducted by Christie & Hutcheson (2003) contradicts Lanaan's findings. They found that attending community college decreases the likelihood of students receiving a bachelor's degree. This finding suggests that students who want to receive a bachelor's degree should not attend community college. In light of the current study, both studies indicate that student persistence in postsecondary education is closely related to academic

preparation in the sense that students have to be academically-prepared to perform well on standardized tests and to pursue a college degree successfully. Hence, under the right conditions SAT math scores and the degree aspirations of students are valuable predictors of community college attendance.

Institutional, Background, and Interaction Variables

In the final step taken to see how background characteristics impact community college choice, research hypothesis six stated that there are no significant relationships among institutional, background, and interaction factors relative to predicting community college attendance. To investigate this hypothesis, the type of institution a student attends was regressed against two institutional factors, two background characteristics, and four interaction combinations (see Table 13). The chi-square statistic (1348.432(8), $p > .001$) for this model indicated that significant relationships existed between the institutional, background, and interaction factors as a function of community college prediction. As a result, this research hypothesis was disconfirmed.

Positive associations existed for the resources students use to pay for college, for the resources students use to pay for college interacting with the housing status of students, and for the race and ethnicity of students interacting with the housing status of students. The predictive nature for the housing status of students, the race and ethnicity of students, and the financial assistance students received for attending a particular college were negative. The results of this analysis suggest that institutional factors, in particular, the housing status of students, are strongly related to community college attendance. These findings may be due to the size of the model or they simply could have occurred by chance. Nonetheless, the outcomes for the

resources students use to pay for college, the housing status of students, and the race and ethnicity of students are interesting factors.

For instance, the odds ratios for the resources students use to pay for college and the race and ethnicity of students are not statistically significant when the housing status for students is not included in the prediction model (see Table 12). However, when the housing status of students is considered, the college funding sources students use to pay for college and the race and ethnicity of students are statistically significant (see Table 13). This occurrence holds true when these factors interact as well. That is, the living arrangements for students while they attend college interact significantly with the college funding resources students use to pay for college and the race and ethnicity of students. More than that, the predictive efficiency of each factor increases as a result of their interactions.

These outcomes demonstrate the extent to which the housing status of students affects the probability of attending a two-year institution; hence, suggesting that the housing status of students while they attend college is a relatively strong predictor of community college attendance. They also show that the race and ethnicity of a student is a significant predictor of community college choice. Considering these findings, background variables positively affect institutional variables as far as community college predictions are concerned.

The present findings are in keeping with race and ethnicity research. Rendon (1993) found that community colleges represent safe havens for minority students. Further, social connections such as ethnic enclaves are vital to the decisions Latinos make relative to attending two-year colleges (Person & Rosenbaum, 2006). Other research indicates that regardless of social economic status the rate for community college attendance is higher for Latinos than for any other racial and ethnic groups (Kurlaender, 2006).

Literature also reveals unique trends relative to housing for community colleges. Traditionally, community college students live off-campus. However, due to the changing community college environment, on-campus housing is an option provided by several public two-year colleges (Townsend, 2007). For instance, rural community colleges have offered on-campus housing to their students for some time now (Moeck, P.G., et al., 2008). On the other hand, some community colleges are having difficulty meeting the housing demands of their students (Bekurs, 2007). These studies show how important housing status is to the success of community college students.

Summary

In sum, two research questions were considered to determine the probability of predicting community college attendance using academic, institutional, and background factors. The questions were: 1. Nationally, what academic and/or institutional factors influence students' choices to attend a two-year college? 2. Nationally, how, if at all, do background characteristics moderate academic and/or institutional factors among community college choice? The first question identified the highest degree students expect to achieve at their current institution, students who major in professional fields, and SAT math scores as consistent academic predictors. The housing status for students and the financial motivation students use to attend a particular college also was used to answer the first research question, because they were consistent institutional predictors of community college choice.

The second research question explored the impactful nature of background characteristics as they relate to using academic and institutional factors as community college predictors. The findings for this question revealed that the impact that background characteristics had on academic factors was small, but it was more noticeable in regard to institutional factors. The

**Table 15: Factors That Impact Community College Choice
(Regression Models, Research Hypothesis, and Prediction Percentages)
Dependent Variable = INSTITUTION TYPE (Two-Year=1, Four-Year=0)**

<i>Model: Academic and Institutional Variables</i>
Research Hypothesis 1: Significant relationships would not exist among academic and institutional factors % Correct Predictions: 87.7%
<i>Model: Background Characteristics</i>
Research Hypothesis 2: Significant relationships would not exist among background variables relative to predicting enrollment to community college % Correct Predictions: 78.3%
<i>Model: Academic, Institutional, and Background Variables</i>
Research Hypothesis 3: No significant relationships between academic, institutional, and background variables relative to predicting community college attendance % Correct Predictions: 86%
<i>Model: Academic, Institutional, Background, and Interaction Variables</i>
Research Hypothesis 4: No significant relationships existed between academic, institutional, and background variables when they interact relative to predicting community college enrollment % Correct Predictions: 87.3%
<i>Model: Academic, Background, and Interaction Variables</i>
Research Hypothesis 5: Significant relationships would not exist among academic, background, and interaction factors % Correct Predictions: 85.7%
<i>Model: Institutional, Background, and Interactions Variables</i>
Research Hypothesis 6: No significant relationships exist among institutional, background, and interaction factors relative to predicting community college attendance % Correct Predictions: 78.9%

findings also indicated that the prediction rate for the first regression model, which included academic and institutional factors only, predicted 87.7 percent of the cases correctly in regard to community college attendance. The model that included academic factors, institutional factors, and background characteristics predicted 86 percent of the cases correctly. The model that

included background characteristics interacting with academic and institutional variables predicted 87.3 percent of the cases correctly. And, the model that included academic variables interacting with background characteristics absent institutional factors predicted community college attendance correctly 85.7 percent of the time. The main implication of these findings is that models that included academic factors served as better predictors of community college attendance compared to models that excluded academic factors (see Table 15). However, models that included institutional factors generated a higher number of statistically significant items.

Implications of the Study

The factors that impact community college attendance are encased in trends based on academic, institutional, and background characteristics. As implied by findings from this study, regression models that include academic factors reveal valuable aspects of community college attendance as they predict community college choice more accurately than institutional factors regression models. However, fewer academic items seem to be statistically significant compared to institutional factors as regression models that include institutional factors absent academic factors have more items that are statistically significant when compared to academic factors models. The same is true concerning background characteristics when they are compared to institutional factors. They play a major role in community college attendance, but not as many background characteristics are as statistically significant as institutional items as well. Considering these outcomes, individual institutional factors may be better predictors of community college attendance, but, overall, academic regression models are more accurate predictors.

Further implications of this study suggest that the use of background characteristics as predictors of community college attendance may be overrated in the sense that they do not

impact academic and institutional factors as significantly as once thought. According to the findings of this study, the overall affect that background characteristics have on academic and institutional factors used to predict community college is small. These findings also can increase the awareness of phenomena relative to the reasons students attend community college. Further, they can possibly help policymakers make informed decisions about funding policies relative postsecondary institutions.

Understanding these findings can help community colleges improve recruitment strategies, especially, knowing that past research has suggested that attending community college reduces the likelihood of receiving a bachelor's degree. Potentially, this barrier can be overcome if students who attend community college are better prepared to navigate through the curriculum offered at postsecondary institutions. This goal may be achieved if the issues that impede postsecondary persistence are addressed early within the academic careers of students, which, in turn, could possibly increase retention rates at community colleges.

Recommendations for Future Research

Some valuable information has been engendered through this study, but there is considerably more to learn. Keeping this in mind, more research is required in this area. In particular, more can be learned concerning the reasons why the housing status of students impacts community college attendance the way it does. More insight also is needed to understand why the background characteristics of students impact certain factors more than they do others. Further, understanding also is needed to find out why certain findings within this study contradict existing research. Continued research in these areas may yield improved methods of community college prediction.

Therefore, it is recommended that more community colleges offer more baccalaureate programs to increase the number of students who are exposed to postsecondary opportunities at the university level, especially in the case of minority males. If community colleges would implement such programs the likelihood of students who attend community college could possibly increase. It also is recommended that community colleges increase the number of special programs (i.e., tutoring, mentoring, daycare, and internships) they offer for all students, but for minority students in particular, to potentially increase the likelihood of students persisting through college towards graduation. Community colleges also should provide scholarships to students who require financial assistance to attend college. Scholarship programs may increase the number of academically-prepared students who enroll in community colleges across the country, which could potentially lead to an increase graduation rates at community colleges.

More research is needed to find out why the current study indicates that students do not attend community college necessarily to advance their careers and to prepare for future career opportunities when past research says otherwise. Researchers also need to conduct studies that examine why the aid students use to pay for college in regard to their degree aspirations negatively impacts community college choice predictions. Lastly, it is recommended that future research look at states with good articulation agreements to see if the findings for those states would be different from the outcomes of this study. Conducting such a study may lead to improved local and state fiduciary policies relative to postsecondary education across the country.

The present study is timely in regard to recent shifts and trends among community colleges. Community colleges also are becoming more diverse, therefore, traditional approaches to education will not sustain without some adjustments. Hence, the current study adds to the

knowledge base of community college attendance while raising more questions worth investigating at the same time.

Appendix: 2005 Student Information Form

White/Caucasian	<input type="radio"/>
African American/Black	<input type="radio"/>
American Indian/Alaska Native	<input type="radio"/>
Asian American/Asian	<input type="radio"/>
Native Hawaiian/Pacific Islander	<input type="radio"/>
Mexican American/Chicano	<input type="radio"/>
Puerto Rican	<input type="radio"/>
Other Latino	<input type="radio"/>
Other	<input type="radio"/>

Grammar school or less	<input type="radio"/>	<input type="radio"/>
Some high school	<input type="radio"/>	<input type="radio"/>
High school graduate	<input type="radio"/>	<input type="radio"/>
Postsecondary school other than college	<input type="radio"/>	<input type="radio"/>
Some college	<input type="radio"/>	<input type="radio"/>
College degree	<input type="radio"/>	<input type="radio"/>
Some graduate school	<input type="radio"/>	<input type="radio"/>
Graduate degree	<input type="radio"/>	<input type="radio"/>

Academic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artistic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cooperativeness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive to achieve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mathematical ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public speaking ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religiousness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (intellectual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (social)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spirituality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

☐ Your mother's occupation
☐ Your father's occupation
☐ Your probable career occupation

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

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

33. Mark one in each row:

	1 Disagree Strongly	2 Disagree Somewhat	3 Agree Somewhat	4 Agree Strongly
There is too much concern in the courts for the rights of criminals	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Abortion should be legal	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
The death penalty should be abolished	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Marijuana should be legalized	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
It is important to have laws prohibiting homosexual relationships	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Racial discrimination is no longer a major problem in America	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Realistically, an individual can do little to bring about changes in our society	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Wealthy people should pay a larger share of taxes than they do now	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Colleges should prohibit racist/sexist speech on campus	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Same-sex couples should have the right to legal marital status	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Affirmative action in college admissions should be abolished	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
The activities of married women are best confined to the home and family	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Federal military spending should be increased	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
The federal government should do more to control the sale of handguns	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Only volunteers should serve in the armed forces	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
The federal government is not doing enough to control environmental pollution	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
A national health care plan is needed to cover everybody's medical costs	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Grading in the high schools has become too easy	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Undocumented immigrants should be denied access to public education	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Through hard work, everybody can succeed in American society	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1
Dissent is a critical component of the political process	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1

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

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

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

None (I am confident that I will have sufficient funds)	<input type="radio"/>
Some (but I probably will have enough funds)	<input type="radio"/>
Major (not sure I will have enough funds to complete college)	<input type="radio"/>

36. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here?

	Very Important	Somewhat Important	Not Important
(Mark <u>one</u> answer for each possible reason)			
My relatives wanted me to come here	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
My teacher advised me	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
This college has a very good academic reputation	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
This college has a good reputation for its social activities	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
I was offered financial assistance	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
The cost of attending this college	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
High school counselor advised me	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
Private college counselor advised me	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
I wanted to live near home	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
Not offered aid by first choice	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
This college's graduates gain admission to top graduate/professional schools	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
This college's graduates get good jobs	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
I was attracted by the religious affiliation/orientation of the college	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
I wanted to go to a school about the size of this college	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
Rankings in national magazines	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
Information from a website	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
I was admitted through an Early Action or Early Decision program	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N
A visit to the campus	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N

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

ARTS AND HUMANITIES	PHYSICAL SCIENCE
Art, fine and applied 1	Astronomy 43
English (language and literature) 2	Atmospheric Science (incl. Meteorology) 44
History 3	Chemistry 45
Journalism 4	Earth Science 46
Language and Literature (except English) 5	Marine Science (incl. Oceanography) 47
Music 6	Mathematics 48
Philosophy 7	Physics 49
Speech 8	Statistics 50
Theater or Drama 9	Other Physical Science 51
Theology or Religion 10	PROFESSIONAL
Other Arts and Humanities 11	Architecture or Urban Planning 52
BIOLOGICAL SCIENCE	Family & Consumer Sciences 53
Biology (general) 12	Health Technology (medical, dental, laboratory) 54
Biochemistry or Biophysics 13	Library or Archival Science 55
Botany 14	Medicine, Dentistry, Veterinary Medicine 56
Environmental Science 15	Nursing 57
Marine (Life) Science 16	Pharmacy 58
Microbiology or Bacteriology 17	Therapy (occupational, physical, speech) 59
Zoology 18	Other Professional 60
Other Biological Science 19	SOCIAL SCIENCE
BUSINESS	Anthropology 61
Accounting 20	Economics 62
Business Admin. (general) 21	Ethnic Studies 63
Finance 22	Geography 64
International Business 23	Political Science (gov't, international relations) 65
Marketing 24	Psychology 66
Management 25	Social Work 67
Secretarial Studies 26	Sociology 68
Other Business 27	Women's Studies 69
EDUCATION	Other Social Science 70
Business Education 28	TECHNICAL
Elementary Education 29	Building Trades 71
Music or Art Education 30	Data Processing or Computer Programming 72
Physical Education or Recreation 31	Drafting or Design 73
Secondary Education 32	Electronics 74
Special Education 33	Mechanics 75
Other Education 34	Other Technical 76
ENGINEERING	OTHER FIELDS
Aeronautical or Astronautical Eng 35	Agriculture 77
Civil Engineering 36	Communications 78
Chemical Engineering 37	Computer Science 79
Computer Engineering 38	Forestry 80
Electrical or Electronic Engineering 39	Kinesiology 81
Industrial Engineering 40	Law Enforcement 82
Mechanical Engineering 41	Military Science 83
Other Engineering 42	Other Field 84
	Undecided 85

DO NOT WRITE IN THIS AREA

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

	(E) Essential	(V) Very Important	(S) Somewhat Important	(N) Not Important
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming an authority in my field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining recognition from my colleagues for contributions to my special field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Influencing the political structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Influencing social values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Raising a family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having administrative responsibility for the work of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being very well off financially	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping others who are in difficulty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making a theoretical contribution to science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing original works (poems, novels, short stories, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creating artistic work (painting, sculpture, decorating, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming successful in a business of my own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming involved in programs to clean up the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing a meaningful philosophy of life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in a community action program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping to promote racial understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keeping up to date with political affairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming a community leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrating spirituality into my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving my understanding of other countries and cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

	(V) Very Good Chance	(S) Some Chance	(L) Very Little Chance	(N) No Chance
Change major field?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change career choice?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in student government?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Get a job to help pay for college expenses?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work full-time while attending college?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Join a social fraternity or sorority?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play varsity/intercollegiate athletics?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make at least a "B" average?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in student protests or demonstrations?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transfer to another college before graduating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Be satisfied with your college?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in volunteer or community service work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek personal counseling?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate regularly with your professors?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socialize with someone of another racial/ethnic group?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in student clubs/groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthen your religious beliefs/convictions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in a study abroad program?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

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

41. A B C D E	48. A B C D E	55. A B C D E
42. A B C D E	49. A B C D E	56. A B C D E
43. A B C D E	50. A B C D E	57. A B C D E
44. A B C D E	51. A B C D E	58. A B C D E
45. A B C D E	52. A B C D E	59. A B C D E
46. A B C D E	53. A B C D E	60. A B C D E
47. A B C D E	54. A B C D E	61. A B C D E

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