

Predicting Academic Success among First-Year, First Generation Students

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(ABSTRACT)

Due to immigration the non-Hispanic White population continues to decrease and the population continues to change in regard to the ethnic and racial make-up. As these demographic changes take place higher education institutions will face increasing pressure from stakeholders to create environments that facilitate degree completion among mounting numbers of populations who are at risk in terms of academic success.

First generation status denotes one group of students who are at risk in terms of persistence towards a bachelor's degree. The purpose of this study was to examine what factors predict the academic success of first year, full-time first generation students. Furthermore, this study examined whether there is a relationship between race, gender, financial need, and language ability and factors used to predict the academic success of first generation students.

Factors were defined as variables measured by the 2002 Your First College Year Survey (YFCY) data (HERI, 2004a). Factors fell into five main areas: Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort (Pascarella & Terenzini, 1991).

The study was based on secondary analysis of the 2002 YFCY data provided by the Higher Education Research Institute at the University of California, Los Angeles. A combination of descriptive statistics, factor analysis, and logistic regression was used for this study.

Findings revealed there are significant differences between academically more successful FGs and FGs who are academically less successful in relation to three factors: Institutional Environment, Student Effort, and Agents of Socialization. FGs are more likely to experience academic success in regard to variables associated with the factor Institutional Environment. There is a greater likelihood FGs will be academically less successful in relation to variables associated with the factors Student Effort and Agents of Socialization. When considering demographic variables in relation to the three significant institutional factors, FGs who are Asian American are more likely to experience academic success. Alternatively, FGs have greater odds of being academically less successful if they are male, African American, Mexican American, and non-native speakers of English.

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Chapter One

Introduction

Over 9,000,000 individuals immigrated to the United States between 1991-2000 (United States Citizenship and Immigration Services, 2002). Due to this influx, nearly one-third of the current U.S. population growth is attributed to immigration. Furthermore, almost 86% of the population growth through the year 2050 may be due to the effects of post-1992 net immigration (United States [U.S.] Census Bureau, 2001a).

Immigration is expected to bring about significant demographic changes to the U.S. population (Bureau of Labor Statistics, 2002; U.S. Census Bureau, 1996; U.S. Census Bureau, 2001a). Changes in the racial and ethnic composition of the U.S. citizenry, as well as the age group in which these changes are expected to take place, are major concerns for state agencies (U.S. Census Bureau, 1996; Western Interstate Commission for Higher Education [WICHE], 2003). In particular, educational institutions will be asked by various stakeholders to meet the needs of a student body that is considerably different than the one currently served (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Lowell & Suro, 2002).

Immigration is expected to alter the proportion of racial and ethnic groups that comprise the U.S. population. By 2050, non-Hispanic Whites are expected to represent a smaller percent of U.S. citizens falling from their current status as 74% of the population to 53% (U.S. Census Bureau, 1996). The declining number of Whites will be replaced by increasing numbers of minority groups (U.S. Census Bureau, 2001a).

Minority growth (i.e. – populations excluding non-Hispanic Whites) projected to take place over the next decade is attributed to an influx of immigrants who are predominantly from non-European countries (U.S. Census Bureau, 2001a). The leading

countries of birth of the foreign-born population in 2000 were Mexico, the Philippines, India, China, Cuba, El Salvador, Vietnam, and South Korea (Bureau of Labor Statistics, 2002).

Looking at the country of origin of the foreign-born population, it is evident the largest growth in minority populations will be among Hispanics and Asians. Growth rates in these two groups are expected to exceed 2% annually until 2030 (U.S. Census Bureau, 1996). Hispanics will add the largest number of people to the population every year until 2050. Projections call for them to add more every year to the U.S. population after 2020 than all other racial/ethnic groups combined. Based on these projections, Hispanics are expected to become the second largest racial/ethnic group behind Whites in the U.S. by 2020 (U.S. Census Bureau, 1996).

The distribution of immigrants according to age will have considerable implications for certain groups within the U.S. minority population. The greatest changes will take place among minorities who are 24 years of age and under (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Lowell & Suro, 2002). By the year 2030, non-Hispanic Whites will comprise less than half of the U.S. population under age 18 (U.S. Census Bureau, 1996).

Demographic changes attributed to immigration will lead to increased minority populations in school systems in America. As more newcomers enter the U.S. education system, K-12 schools will need to make sure the needs of increasing numbers of minority students are met. Postsecondary institutions will need to accommodate greater numbers of minorities as these students move through the educational pipeline (U.S. Census Bureau, 2001b; WICHE, 2003).

Children whose parents are foreign-born are expected to represent over one-half of the growth among school-aged individuals between 1990 and 2010 (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001). Recent census data point to the fact that among school-aged children 20% have at least one foreign-born parent. These figures include the 5% of elementary and high school students who are themselves foreign born. When considering Asian minors, 88% have a foreign born parent. Among the Hispanic population, 65% have a foreign-born parent (U.S. Census Bureau, 2001b).

As more newcomers matriculate, high school graduation rates among minority groups are expected to change. Every state, with the exception of Hawaii, can expect to experience a significant increase in Hispanic graduates. Asian/Pacific Islanders are also expected to graduate in increasing numbers (WICHE, 2003).

By the year 2013, Hispanic high school students are expected to represent one-fifth of the graduating class. Growth in the number of Hispanic high school graduates represents an increase of roughly 11%, from an average of 9% in 1993-94 to 20% of the graduates in 2013-14. Asian and Pacific Islanders will also increase their share among graduates, making up 7% of the graduating class for 2013-14. Non-Hispanic Whites will represent a smaller share of high school graduates, dropping from 72.4% to 58% (WICHE, 2003).

Demographic shifts in the population due to immigration will also affect colleges and universities. Nearly 1.5 million Hispanics have enrolled in American colleges since 1980. College going rates among Hispanics have led to a tripling in enrollment among this group during the period of 1980 to the present day (Foster, 2004). In addition, immigration has played a part in the college enrollment among Asians. Their numbers

more than tripled during the 20 year time period between 1980 and 2000 (American Council on Higher Education, 2003).

The influx of immigrants has significant implications for higher education institutions for two major reasons. The first has to do with the positive contributions immigrants can make to the U.S. economy if they receive a postsecondary education (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Institute for Higher Education Policy and Scholarship America, 2004; Lowell & Suro, 2002; Vernez & Abrahamse, 1996). Second, colleges and universities will need to become increasingly concerned with the changing demographic population and the progress those individuals make to degree completion. Positive contributions associated with immigration are more likely to be realized if a bachelor's degree is earned (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Murtaugh, Burns & Schuster, 1999; National Center for Public Policy and Higher Education, 2004; Vernez & Abrahamse, 1996).

Overall, immigration is a significant factor in economic viability. Immigrants played an important role in the 1996-2000 labor-force expansion. Foreign-born workers constituted 48.6% of the total labor force increase. Among minority groups, Asians and Hispanics accounted for the largest growth in the labor force (Bureau of Labor Statistics, 2002).

Positive contributions to the economy made by immigration can be counterbalanced by newcomers who lack formal education (Hagy & Staniec, 2001; Lowell & Suro, 2002; Vernez & Abrahamse, 1996). Individuals who lack education discover they are qualified for a limited number of jobs and as a result find themselves living in poverty. Lack of postsecondary education creates a variety of economic and

social problems (Hagy & Staniec, 2001; Lowell & Suro, 2002; Vernez & Abrahamse, 1996).

Therefore, academic success and degree completion will continue to be a critical factor in determining whether immigrants experience upward economic mobility (Lowell & Suro, 2002). Economic gains are directly related to the level of educational attainment (Institute for Higher Education Policy and Scholarship America, 2004; National Center for Public Policy and Higher Education, 2004).

Economic benefits are more likely to be realized if a person earns a bachelor's degree (Institute for Higher Education Policy and Scholarship America, 2004; National Center for Public Policy and Higher Education, 2004). The median annual salary of an individual with a bachelor's degree is \$46,969. A person with a bachelor's degree earns roughly \$15,000 more in annual income compared to someone whose highest degree earned is a high school diploma (Institute for Higher Education Policy and Scholarship America, 2004).

Increased earning capacity from a postsecondary education benefits the individuals. Such capacity also benefits local communities, states, and the federal government (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001). The degree of academic success experienced by recent immigrants directly affects state economies (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Institute for Higher Education Policy and Scholarship America, 2004; National Center for Public Policy and Higher Education, 2004).

Benefits to state economies are incurred through several compounding factors derived from an educated population whose members have obtained at least bachelor's degree (Institute for Higher Education Policy and Scholarship America, 2004). For

instance, college graduates earn higher salaries. Increased personal income translates into increased tax revenue for state governments (Carey, 2004; Institute for Higher Education Policy and Scholarship America, 2004; National Center for Public Policy and Higher Education, 2004).

A college degree also qualifies an individual for a wider variety of jobs and/or careers. Degree attainment results in lower unemployment rates. Individuals who are employed rely less on public assistance programs supported by tax dollars and state agencies (Institute for Higher Education Policy and Scholarship America, 2004).

Four-year postsecondary institutions are primarily responsible for educating citizens who obtain a bachelor's degree and enter the labor market (National Center for Public Policy and Higher Education, 2004). Therefore, these institutions will need to become increasingly concerned with the proportion of their enrollment made up of foreign born students or students whose parents are foreign born (WICHE, 2003).

Likewise, academic success experienced by newcomers has far reaching implications for state governments, state agencies, and tax payers (Institute for Higher Education Policy and Scholarship America, 2004). Postsecondary institutions, in turn, are growing increasingly concerned with students who enroll and do not obtain a degree (National Center for Public Policy and Higher Education, 2004).

Disparities in graduation rates that already exist in the U.S. higher education system will be even more confounded by several factors when considering newcomers. Recent immigrants and their children are more likely to have characteristics that impede the educational process and pose significant problems to academic success during college (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001). Characteristics include race,

gender, English language abilities, financial need, and level of education received by a parent.

Populations At Risk For Academic Success

Subgroups within the college population share personal characteristics that affect their academic success and likelihood of obtaining an advanced degree (Tinto, 1993). Race (Berger & Braxton, 1998; Murtaugh, Burns & Schuster, 1999), gender (Leppel, 2002; Ting & Robinson, 1998), language ability (Kiang, 1992), financial need (Somers, Woodhouse, & Cofer, 2004), and level of education received by a parent (Vernez & Abrahamse, 1996) are characteristics that can influence a student's academic success.

Currently, among first-time, full-time students who enroll in college, only six out of every ten obtain a bachelor's degree within a six year period (Carey, 2004). Degree attainment is even lower for minority populations who enroll in college in the U.S. Blacks, Hispanics, and American Indians are at a higher risk for withdrawing from college and not completing their degree than their White peers (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Murtaugh, Burns & Schuster, 1999; National Center for Public Policy and Higher Education, 2004).

Racial disparities are also evident when examining the rate at which degrees are obtained. For example, the six-year graduation rate is 63% for all students enrolled. However, only 47% of Hispanics complete a four-year degree within a six year period. Likewise, the degree completion rate within a six-year period for African Americans is 46% (Carey, 2004).

Racial and ethnic characteristics can have a confounding influence on integration to college (Murtaugh, Burns & Schuster, 1999). Race impacts satisfaction with the

college environment and subsequently impacts a student's decision to re-enroll (Berger & Braxton, 1998).

Many minority students fail to establish a strong connection to the university. For instance, minority students are less likely to become involved in the decision making process of the institution. They are also less likely to form meaningful relationships with peers. Lack of involvement leads to dissatisfaction with the college experience and impacts minority students' academic success (Berger & Braxton, 1998; Murtaugh, Burns & Schuster, 1999).

Gender also can have a significant influence on students' academic success (Leppel, 2002; Ting & Robinson, 1998). For instance, females may have different priorities (based on competing demands for their time) that influence their academic performance (Leppel, 2002). Males and females may be socialized to the college environment differently because of inequities in the system and this impacts student achievement (Ting & Robinson, 1998). Gender negatively impacts academic success among women who are not socially integrated and who have external commitments that compete with academic demands (Leppel, 2002).

English speaking ability among some groups of immigrant students is associated with adjustment issues. English proficiency can deter individuals from enrolling in college (Vernez & Abrahamsen, 1996). Those who do enroll may struggle academically because language barriers prevent them from understanding lectures (Kiang, 1992). In addition, language barriers and associated cultural differences initially affect a student's ability to learn new material (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Vernez & Abrahamse, 1996). These adjustment issues negatively influence academic

success and integration into college (Gray, Vernez, & Rolph, 1996; Hagy & Staniec, 2001; Kiang, 1992; Vernez & Abrahamse, 1996)

Financial need is yet another factor that affects success in college. The difference between college costs and family income creates different levels of financial need among students (King, 2002). Ultimately, financial need and accumulated debt load negatively affects students' academic success (Bui, 2002; King, 2002; Somers, Woodhouse, & Cofer, 2004).

Financial need impacts students' decisions regarding enrollment and living arrangements (King, 2002). For instance, low income students are more likely to live off campus and attend college part-time. The negative implications this has for academic success is evident in low-income students who are more likely than middle- and upper-income peers to drop out of college (King, 2002).

Choices students make to finance their education also impact academic adjustment and success (King, 2002). Students who enroll full-time, work part-time, and borrow money to pay for college are more likely to graduate. This holds true regardless of income level of the student (King, 2002).

Finally, parents' level of education affects academic success. This is important for several reasons when considering the shifting demographic changes in the U.S. population (Horn, 1998). Several statistics point to the fact that there is a greater likelihood immigrant children are coming from homes where neither parent has obtained a college degree (Bureau of Labor Statistics, 2002; U.S. Census Bureau, 2003; Vernez & Abrahamse, 1996). Having parents who have not obtained a college degree is especially true for Hispanics who comprise a growing proportion of the foreign-born population (U.S. Census Bureau, 2003).

More than one-fifth of the foreign born population aged 25 and older (21%) had less than a ninth-grade education. Within this age group, 67% of immigrants are high school graduates, compared with 87% of the native born population (U.S. Census Bureau, 2003).

Hispanics are at the greatest disadvantage when looking at level of education among family members. Within the foreign born population, Asians are more likely to graduate from high school (84%). However, only 50% of Hispanics hold a high school diploma (Bureau of Labor Statistics, 2002; U.S. Census Bureau, 2003).

Differences in degree obtainment among these racial and ethnic groups are duplicated at the postsecondary level. As a group, 27% of foreign born individuals over age 25 have obtained a bachelor's degree. The percentage of foreign born Hispanics who have obtained a bachelor's degree is 11% whereas 46.5% of foreign born Asians have graduated from college (Bureau of Labor Statistics, 2002).

Statistics related to degree obtainment among family members have notable implications for students who are attempting to pursue a postsecondary education. Among native students as well as newcomers, parents' level of education impacts persistence to degree (Choy, 2001; Horn & Nunez, 2000; Vernez & Abrahamse, 1996; Warburton, Bulgarian, & Nunez, 2001).

Students from households where parents have not obtained a bachelor's degree are collectively labeled first generation students (FGs) (York-Anderson & Bowman, 1991). FGs are a distinct subgroup in the college bound population who share characteristics that place them at risk in terms of adjustment and persistence (Pascarella, Pierson, Wolniak, & Terenzini, 2004). FGs are seen as different from students who come from homes where a parent has attended college or graduated with a four-year degree

(Choy, 2001). Students who have at least one parent who graduated from college are known as non-first-generation students (NFGs).

Parents' educational attainment impacts students in several distinct areas. Access to postsecondary institutions, academic preparation, enrollment behaviors, and academic achievement are four areas that place FGs at a disadvantage with respect to academic success (Choy, 2001; Horn & Nunez, 2000; Warburton, Bugarin, Nunez, 2001).

Access to postsecondary institutions is an initial hurdle that FGs confront. Overall, enrollment rates are lower for FGs when compared to NFGs. In 1999, 82% of NFGs enrolled in college immediately after finishing high school. Among FGs, that rate was 54% (Choy, 2001).

Roughly a quarter of all students who were in the top 10% of the 1992 graduating class were FGs. Thirteen percent (13%) of those highly qualified FGs did not enroll in any postsecondary education two years after graduating from high school (Horn & Nunez, 2000).

Disadvantages for FGs are not limited solely to access to postsecondary institutions. Additional issues for FGs are also manifested in below average academic preparation (Choy, 2001; Warburton, Bugarin, & Nunez, 2001). As a group, FGs are less likely to participate in academic college preparatory programs at the secondary level. Sixty-three percent (63%) of FGs complete at least one advanced math course while enrolled in high school compared to 83% of NFGs (Horn & Nunez, 2000). In addition, 14% of FGs take high school level algebra in eighth grade, compared to 34% of NFGs (Horn & Nunez, 2000).

FGs tend to have less academic preparation and lower academic aspirations than NFG peers (Hahs-Vaughn, 2004). This impacts two key indicators of success in college,

Scholastic Aptitude Test (SAT) scores and high school GPA. FGs have lower SAT scores and average high school GPAs than NFGs (Riehl, 1994).

Ultimately, FGs are less likely than NFG peers to persist to degree. Eighty-eight percent (88%) of students whose parents had a bachelor's degree attained a degree or were still enrolled three years after entering a four year institution compared to 73% of FGs (Warburton, Bugarin, Nunez, 2001).

Increased pressure on four year institutions to raise graduation rates among populations at risk for graduation will continue as more students who represent the changing demographics of the U.S. population enroll (WICHE, 2004). This pressure is evident when considering the demographic characteristics that combine to create a difficult transition to the college environment for students who are FG (Horn, 1998). FG status combined with the fact these students may be among racial minorities on campus (Choy, 2001; Ishitani, 2003; Nunez & Cuccaro-Alamin, 1998), female (Bui, 2002; Ishitani, 2003), and may be disadvantaged by language ability (Kiang, 1992) and financial need (Bui, 2002; Somers, Woodhouse, & Cofer, 2004) impacts their academic success (Ishitani, 2003).

First Year of College

The first year of enrollment is crucial for ensuring academic success among college students (Pascarella & Terenzini, 1991; Tinto, 1993). This is especially true for FGs whose demographic characteristics place them at risk for continued academic success (Horn, 1998; Ishitani, 2003).

Once enrolled in college, FGs remain at a disadvantage in terms of transition to college. For example, the risk of departure in the first year of college is 71% higher for FGs than for NFG peers (Ishitani, 2003). Furthermore, 23% of FGs leave college before

the second year compared to 10% of NFGs (Horn, 1998). When compared to all students who transfer or leave for a period of time, FGs are more than twice as likely to leave their first institution without ever returning (Horn, 1998; Warburton, Bugarin, Nunez, 2001).

FGs have lower end-of-freshmen-year-GPAs than NFG peers. Lower academic achievement can also be illustrated by the fact that FGs are more likely to have taken one remedial course compared to NFGs (Horn, 1998; Warburton, Bugarin, Nunez, 2001).

Student academic success during the first year of college is a reflection of a student's academic, social and personal experiences within the institution (Pascarella & Terenzini, 1991; Tinto, 1993). Formal and informal interactions the student has with the various facets of the institutional environment will impact their cognitive development (Pascarella & Terenzini, 1991; Tinto, 1993).

Theoretical Model to Promote Academic Success

Several factors have been offered in one prominent theoretical model used to promote academic success among first year students (Kuh, 1999; Pascarella & Terenzini, 1991; Tinto, 1993). Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort are five factors presented in Pascarella and Terenzini's (1991) theoretical framework. Academic success within the college environment is affected by a combination of variables related to each of these factors (Pascarella & Terenzini, 1991).

Certain variables have been predetermined prior to a student's enrollment. Academic aptitude, self-concept, psychological state, personality, aspirations, and demographic characteristics are background traits formed prior to enrollment. Student characteristics such as these mediate the confounding effects of the college experience (Pascarella & Terenzini, 1991).

Socialization occurs through interaction with faculty and peers on campus (Pascarella & Terenzini, 1991; Tinto, 1993; Tinto & Goodsell, 1994). Positive social interaction with these groups influences student academic success (Pascarella & Terenzini, 1991; Tinto, 1993).

Interaction with faculty inside and outside of class exposes students to ideas, values, and beliefs which encourages the learning process to take place. Faculty members have the ability to build influential relationships with students on campus that lead to measurable gains in academic knowledge and skills (Pascarella & Terenzini, 1991).

Similarly, contact with peers is an important part of students' daily life. Interaction allows them to receive information about the community and institution (Pascarella & Terenzini, 1991; Tinto, 1993). Incorporation into the academic and social communities of the institution facilitates cognitive development (Pascarella & Terenzini, 1991).

The structural and organizational aspects of an institution create the framework within which students interact with groups on campus. One component of the structural characteristics of an institution is the residential nature of the institution. The residential nature of a college campus is another structural characteristic that can impact cognitive development and student learning. College campuses offering residential programs targeted towards social and cognitive growth are more likely to see these features coupled with academic success for their first year students (Pascarella & Terenzini, 1991).

The structural characteristics of the institution and the socialization process are reinforced by the institutional environment with which an individual interacts. Environments that are academically and socially engaging promote student academic success (Kuh, 2003). The college environment is composed of structures, policies,

programs, and services that influence cognitive development among students in classrooms and outside of the immediate academic setting (Pascarella & Terenzini, 1991).

The academic program is a primary component of student learning. The academic program includes a variety of facilities such as the library and classrooms. It also includes the courses in which students enroll and the instruction they receive (Pascarella & Terenzini, 1991).

Social engagement occurs through involvement in a range of activities that requires interaction with peers and faculty. Athletics, clubs and organizations, and employment on college campuses are all aspects of social engagement (Pascarella & Terenzini, 1991).

To be academically successful, students must make use of services and facilities offered within the institution. Academic success is not entirely dependent upon the institutional context. Students' college experience is also affected by the effort with which they pursue academic endeavors. Students must make an effort to engage in social and academic experiences in order to reap the rewards (Pascarella & Terenzini, 1991).

These five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, Student Effort) presented in the model provide a way to conceptualize variables that affect student success. This is helpful when examining the academic success of at-risk populations such as FGs.

In summary, immigration is causing significant demographic changes in the U.S. population (U.S. Census Bureau, 2001). There are both private and public implications associated with educational attainment among increasing numbers of racial and ethnic minorities (National Center for Public Policy and Higher Education, 2004).

Individuals are more likely to increase their quality of life if they earn a bachelor's degree (Institute for Higher Education Policy and Scholarship America, 2004). States are more likely to benefit from increased tax revenue and fewer demands on social services (Hagy & Staniec, 2001; Lowell & Suro, 2002; Vernez & Abrahamse, 1996) if individuals earn a bachelor's degree (National Center for Public Policy and Higher Education, 2004).

Combined personal and societal gains related to educational attainment has led to increased pressure on higher education institutions to facilitate degree completion. Newcomers to the U.S. recognize economic benefits derived from obtaining a bachelor's degree (Vernez & Abrahamse, 1996). Due to the perceived benefits associated with an advanced degree, postsecondary institutions will continue to see increasing numbers of students who represent the changing demographics in the U.S. population (WICHE, 2003).

As the non-Hispanic White population continues to decrease and the population continues to change in regard to ethnic and racial make-up, institutions will face increasing pressure to create environments that facilitate degree completion among mounting numbers of populations who are at risk in terms of academic success, and therefore not graduating from college (American Council on Education, 2004; Carey, 2004; Institute for Higher Education Policy and Scholarship America, 2004; Vernez & Abrahamse, 1996; WICHE, 2003). FG status denotes one group of students who are at risk in terms of persistence towards a bachelor's degree (Horn, 1998; Horn & Nunez, 2000; Warburton, Bugarin, Nunez, 2001).

Access to postsecondary institutions, academic preparation, enrollment behaviors, and academic achievement are four areas that negatively impact FG persistence (Choy,

2001; Horn & Nunez, 2000; Warburton, Bugarin, Nunez, 2001). Demographic variables such as minority status, gender, financial need, and language ability associated with FGs impede their academic success as well (Choy, 2001; Horn & Nunez, 2000; Ishitani, 2003; Kiang, 1992).

Promoting academic success among FGs will continue to be an institutional priority as a greater number of these students enroll at colleges and universities (ACE, 2004; Institute for Higher Education Policy and Scholarship America, 2004; Vernez & Abrahamse, 1996; WICHE, 2003). By examining several factors and how they apply to at-risk subpopulations in the college environment, colleges can promote academic success among these groups (Tinto, 1993). The model presented by Pascarella & Terezini (1991) provides one way to conceptualize factors that influence student academic success. Factors include: Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort (Pascarella & Terenzini, 1991).

Despite a growing awareness of hurdles faced by FGs, few studies have examined FGs during the crucial period of adjustment comprised of the first year of full-time enrollment (Bui, 2002; Ishitani, 2003; Riehl, 1994; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Little is known about how factors such as Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort (Pascarella & Terezini, 1991) impact their academic success during the first year. This study was designed to address that gap in the literature.

Purpose Statement

The purpose of this study was to examine what factors predict the academic success of first year, full-time FGs. Furthermore, this study examined whether there is a

relationship between race, gender, financial need, and language ability and factors used to predict the academic success of FGs.

The sample included FGs who self-identified based on their responses to the 2001 Cooperative Institutional Research Program survey (CIRP) about levels of education for mother and father (HERI, 2004b). For purposes of this study, FGs were defined as students who classified both parents as falling into the following categories of educational attainment: grammar school or less, some high school, high school graduate, postsecondary school other than college. Furthermore, to be included in the sample participants needed to indicate they were matriculating as full-time students without any previous higher education enrollment.

Financial need was also defined in relation to an item on the CIRP. Financial need was defined as the amount of a student's first year educational expenses (room, board, tuition, and fees) the student estimates were covered from aid which must be repaid (loans) (HERI, 2004a).

Factors were defined as variables measured by the 2002 *Your First College Year Survey* (YFCY) data (HERI, 2004a). Factors fell into five main areas: Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort (Pascarella & Terenzini, 1991). The YFCY will be reviewed in detail in the instrumentation section of Chapter Three.

Academic success was defined as students' responses on the YFCY that indicated a first semester GPA of 1.75 or higher. A first semester GPA below a 1.75 denoted students who were less successful academically (Tinto, 1993).

English language ability was defined as student's response to question number seven on the YFCY. Students must indicate if English is their native language (HERI, 2002).

Research Questions

The present study explored five research questions concerning first generation students:

1. Are there significant differences between more academically successful FGs and FGs who are less successful academically on combinations of five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort)?
2. Is there a relationship between Race and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?
3. Is there a relationship between Gender and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?
4. Is there a relationship between Financial Need and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?
5. Is there a relationship between identified Language Ability (native and non-native speakers of English) and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?

Significance of the Study

The present study was significant for future practice, research, and policy. In terms of practice, several constituencies might benefit from the results. For example, the results of this study provided student affairs professionals with data related to out-of-classroom factors that predict successful adjustment of FGs during their first year of college. Student affairs professionals might use the results to design support programs aimed specifically at first-year FGs.

FGs may also benefit from the results of this study. The results provided them with information about the potential impact of language ability on factors that predict their academic success. Students who are classified as FG may wish to consider this information when determining where to enroll during their freshmen year in relation to institutional support programs that are offered to students for whom English is a second language.

Finally, academic administrators, such as deans and department heads, might benefit from the findings of this study. This study provided information about the impact of academic and social variables on the academic success of FGs. Academic administrators might use this information to determine whether their departments are serving FGs in appropriate ways.

The present research also served as a springboard for future studies. I explored what factors predict the academic success of first-year, full-time FGs at four year institutions. Given that a significant number of minority students who are FGs enroll at two year institutions future studies might examine FGs enrolled at two year institutions (Choy, 2001). Such a study would expand on the information available about the factors used to predict success of first year, full-time FGs.

This study used a national data set. Additional studies might be conducted on individual campuses. Similar studies conducted at individual institutions would increase the information related to the influence of social and academic factors that predict the success of first year, full-time FGs within specific institutional environments.

Immigrant status versus non-immigrant status as it applies to FGs was a factor that was not examined in this study. Additional studies might look at whether factors used to predict success differ based on immigration status of the student. Such a study would provide more detailed information about whether success is impacted by immigration status.

Finally, the study was significant in terms of future policy. The results provided insight to policymakers in terms of the effect of financial need on academic success. Policymakers might use these data when considering how financial aid policy may predict the academic success of FGs.

This study may be useful for policymakers concerned with institutional climate. The findings provided information on academic and social factors that predict the academic success of FGs. These data might be used to assess policies vis a vis institutional climate and academic success.

Finally, this study was significant for policymakers concerned with curriculum and instruction. These results offered insight into the effect of factors related to the instructional environment and academic success among FGs. These data might be used by policymakers to shape the content of classes for first-year students.

Delimitations

As with all research, the present study had some initial delimitations. The first dealt with the sample. A sub-set of a national sample was used for this study. This prevented individual

institutional characteristics from being examined. It is possible that institutions might have differed significantly from one another. If so, those differences might have influenced the results in some unforeseen manner.

Second, classification of FG status may have posed a delimitation. Students in this study self-identified as FGs. It is possible some students incorrectly self-identified as FG or that some FGs failed to identify themselves as such. In either eventuality the findings might have been influenced.

The manner in which data were collected for this study may have posed a delimitation. The instrument was administered at the end of the second semester of participants' first year in college. It is possible that two semesters was an insufficient time period for factors related to academic success to manifest. If data were collected at a later point in time results might have differed.

Finally, the data for this study were based upon self-reported answers. Self-reported answers may be an insufficient means to collect information about factors that affect the academic success of FGs during their freshmen year. If data were collected through some other means results might have differed.

Despite these initial delimitations, the study was important because predicting the academic success of FGs is an area that has been neglected in the literature. The research provided an opportunity for educators and policymakers to learn more about FGs. The present study provides a framework for future studies that explore FGs.

Organization of the Study

The present study is organized around five chapters. Chapter One introduced the topic of study, the research questions and the significance of the study. The second chapter reviews the literature relevant to the study. Chapter Three describes the methodology of the study, including

the sampling techniques and the procedures used to collect and analyze the data. The fourth chapter describes the results of the study while the final chapter discusses the results and their implications for future practice, research and policy.

Chapter Two

Literature Review

This study was designed to address the gap in the literature regarding first generation students' (FGs) academic success during the first year of full-time enrollment at a four-year institution. Factors that predict the academic success of first year, full-time FGs were explored in relation to less academically successful FGs. The study also examined whether there is a relationship between confounding variables and factors used to predict the academic success of FGs. The literature review is based around these areas of study.

First, for the purposes of this study, academic success is defined as a grade point average (GPA) of 1.75 or higher. Therefore, GPA as a measure of academic success for first year students is discussed.

This study uses five factors to predict the academic success of FGs. The factors include: Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort. These factors as they apply to the academic success of students in general is reviewed next. Literature that specifically addresses how these factors impact the academic success of FGs is incorporated where available.

Furthermore, this study examined whether there is a relationship between Race, Gender, Financial Need, and Language Ability and factors used to predict the academic success of FGs. Existing literature relating to the impact of these additional variables on the academic success of FGs is reviewed in the final section of the chapter.

GPA as a Measure of Academic Success

The most common measure of academic success is student GPA. Overall, GPA is directly linked to continuing enrollment for college students. It serves as a surrogate measure for the degree to which students have responded to the mutually reinforcing variables that comprise the college experience (Allen, 1999; McGrath & Braunstein, 1997; Tross, Harper, Osher, & Kneidinger, 2000).

Students who do not respond favorably to the institutional environment do not perform well academically. Poor academic performance results in dismissal from the college environment (Tinto, 1993). A low GPA results in institutional departure for two major reasons. The first relates to institutional policies that prevent the student whose GPA is less than an established level from re-enrolling. GPA may also cause a student to leave because of a negative social stigma attached to failure (Tinto, 1993).

GPA earned during the first year and in some cases, first semester, is a better indicator of continued enrollment and academic success than other variables (Allen, 1999; McGrath & Braunstein, 1997). Additional indicators linked to academic success include minority status, gender, and socioeconomic status. GPA is more predictive of student departure than these other factors combined (Allen, 1999; McGrath & Braunstein, 1997).

GPA is the primary indicator of whether students have responded to various factors that create the complex system called the college experience (Kuh, 1999; Pascarella & Terenzini, 1991). Equally important when examining academic success is consideration of factors that are related to academic success among students (Pascarella & Terenzini, 1991).

Factors Related to Academic Success

Several factors related to the academic success of college students are described in Pascarella & Terezini's model (1991). Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort are factors that have been associated with academic success (HERI, 2004a; Pascarella & Terenzini, 1991). Variables related to the five factors have been used to examine the academic success of NFGs and, to a lesser degree, FGs.

Background Characteristics

Students enter college with a pre-determined set of Background Characteristics. Variables associated with this factor include self-confidence, realistic self-appraisal, and coping mechanisms (Bryson, Smith, & Vineyard 2002; Jackson, Smith, & Hill, 2003; Sedlacek, 2004). Background Characteristics such as these are related to the academic success of NFGs and FGs (Bryson, Smith, & Vineyard 2002; Jackson, Smith, & Hill, 2003; Sedlacek, 2004).

Students who demonstrate positive changes in self-confidence are more likely to continue to achieve academically (Bryson, Smith, & Vineyard 2002; Jackson, Smith, & Hill, 2003; Sedlacek, 2004). Successful students must possess confidence and a strong sense of self to navigate an unfamiliar system (Sedlacek, 2004). For instance, students who indicate they feel confident in their educational and career decisions are more likely to be academically successful. In addition, students who feel confident in their beliefs and actions based on those beliefs are more likely to experience academic success at the end of the first semester (Bryson, Smith, & Vineyard 2002).

Self-concept is an area that is significantly related to the academic success of FGs. Self-concept is an area with which FGs struggle (Inman & Mayes, 1999). They often find

themselves exposed to unfamiliar environments. This requires an adjustment process in which FGs must trade previous social identities for the acquisition of other identities. FGs who are capable of making such an adjustment are more likely to be academically successful (London, 1992).

Realistic self-appraisal suggests an individual is capable of assessing his/her strengths and weaknesses so development may occur. Positive indicators of realistic self-appraisal correlate with higher GPA and greater likelihood of persistence (Sedlacek, 2004).

Similarly, coping mechanisms such as assertiveness and a sense of independence are linked to continued persistence (Jackson, Smith, & Hill, 2003). Confidence in these areas allows an individual to cope with new and different experiences presented in the college environment leading to academic success (Bryson, Smith, & Vineyard 2002; Jackson, Smith, & Hill, 2003).

Furthermore, students who possess coping mechanisms have the ability to deal successfully with emotional stress in college. These coping mechanisms might include concentrating on specific objectives. Students who are focused on a particular goal are more likely to experience academic success and to be retained (Pritchard & Wilson, 2003).

Additional coping mechanisms can include indicators of religiousness and spirituality (Jackson, Smith, & Hill, 2003; Pritchard & Wilson, 2003). Religiousness and spirituality affect student persistence by functioning as a sense of support as students engage in academic work. This includes turning to prayer and meditation to help cope with the demands of the college environment (Jackson, Smith, & Hill, 2003).

There are also several coping mechanisms that are predictive of FGs' academic success. Goal orientation is a Background Characteristic that promotes academic success among FGs. Goals determine how students spend their time (Tinto, 1993).

FGs enroll in college with lower academic aspirations than NFGs, citing lower degree aspirations (Hahs-Vaughn, 2004). FGs also have lower expectations for end-of-first-semester GPA (Riehl, 1994). This negatively affects FGs' academic success (Hahs-Vaughn, 2004; Riehl, 1994). However, FGs who demonstrate a preference for long-term goals are more likely to experience academic success as they move beyond the first semester (Ting, 2003).

FGs have other coping mechanisms such as personal attributes that contribute to their academic success (Naumann, Bandalos, & Gutkin, 2003). The ability to self-regulate learning contributes to the prediction of end-of-first semester GPA. Variables such as self-efficacy, study strategies, and time management combined with standardized test scores are variables related to Background Characteristics that successfully predict the academic success of FGs (Naumann, Bandalos, & Gutkin, 2003).

Agents of Socialization

Student academic success is also influenced by encounters students have with faculty and peers (Pascarella & Terenzini, 1991). These interactions comprise the factor entitled Agents of Socialization.

Agents of Socialization promote academic success among students. Variables associated with this factor combine to create a sense of connection to the institution. Greater connection to the campus leads to increased cognitive growth (Kuh, 1999; Pascarella & Terenzini, 1991).

Frequent student interaction with faculty and college personnel is a variable that is significantly related to student success (Clark, Walker, & Keith, 2002; Eimers, 2001; Mayo, Murguia, & Padilla, 1995). Class assignments and course work that encourage positive interaction with peers also facilitate cognitive development (Bauer & Liang, 2003; HERI, 2004a; Kuh & Gonyea, 2003; Kuh & Hu, 2001; Nisbett, Ruble, & Schurr, 1982). Finally, interaction with peers outside of class socializes the student to the college experience (Berger & Milem, 2002; Ebberhardt, Rice, & Smith, 2003; Mayo, Murguia, & Padilla, 1995).

Students need to develop meaningful relationships with faculty. They should feel respected by faculty and be able to meet with them on a regular basis. Interacting with staff in informal non-academic settings can also provide a venue for academically meaningful activities (Eimers, 2001).

Together, spending time with faculty during office hours and outside of office hours impacts academic success (Mayo, Murguia, & Padilla, 1995). Seeing a faculty member as a role model contributes to higher GPAs among students (Mayo, Murguia, & Padilla, 1995). Similar results are seen when students interact during office hours with other academic personnel on campus such as academic advisors and teaching assistants (Clark, Walker, & Keith, 2002; Eimers, 2001).

A sense of community often stems from students who feel they are being personally engaged by faculty and staff. Students who experience engagement are more likely to be academically successful. Being engaged with faculty and staff allows students to ask questions and establish a personal connection with others on campus (Jackson, Smith, & Hill, 2003).

Developing close friendships with other students is another variable related to academic success while enrolled in college. Students are expected to live with peers for an extended period of time in a largely unfamiliar environment. The ability to develop interpersonal relationships is an important part of the college experience and predicts whether students will succeed academically (Baker & Siryk, 1986).

Academic success is also a result of gains in affective learning that occur through faculty contact. Interest in course content and in behaviors and ideas presented by professors encourage engagement. Engagement in these areas, as a result of exposure to Agents of Socialization, leads to increased learning on the part of the students (Clark, Walker, & Keith, 2002).

Spending time with peers during social activities outside of the classroom offers additional opportunities for interaction with Agents of Socialization (Berger & Milem, 2002; Ebherhardt, Rice, & Smith, 2003; Mayo, Murguia, & Padilla, 1995). This includes the amount of time involved in student organizations. It also includes academic assignments that require out of class engagement. Time spent participating in these activities contributes to student academic success (Berger & Milem, 2002; Ebherhardt, Rice, & Smith, 2003; Mayo, Murguia, & Padilla, 1995).

Positive effects on academic success are linked to membership in student organizations such as student government, and religious and cultural groups. Formal social integration in groups such as these allows students to form relationships that indirectly contribute to a successful GPA (Mayo, Murguia, & Padilla, 1995).

Interpersonal interaction with peers also occurs through activities associated with academics. For instance, community service opportunities that are academically based allow students to interact with one another. Interaction contributes to an enhanced self-

concept among students and is indirectly associated with academic success (Berger & Milem, 2002).

How students interact with peers is an equally powerful predictor of academic success. Negative interaction can include the use of alcohol and other stimulants associated with poor social health. Frequent use of alcohol and smoking cigarettes are linked to decreased academic success (DeBerard, M.S., Spielmans, & Julka, 2004).

Joining a fraternity or sorority, another important indicator of peer interaction, is negatively associated with academic success. Some researchers have found membership in Greek organizations is linked to decreased academic success. Members of Greek organizations are more likely to use alcohol and participate in behaviors that put them at-risk such as driving while under the influence of alcohol and having unprotected sex after consuming alcohol (Ebberhardt, Rice, & Smith, 2003).

Consequently, Agents of Socialization can affect student academic success both positively and negatively. Structural Characteristics that are part of the college experiences are also linked to academic outcomes of NFGs and FGs.

Structural Characteristics

Structural Characteristics indirectly influence a student's college experience. Organizational attributes affect the degree of integration and involvement a student has with social and academic systems (Pascarella, 1985). For instance, institutions with large enrollments and high student to faculty ratios negatively influence a student's ability to interact with faculty and peers (Pascarella, 1985).

Structural Characteristics also affect academic success. Living on-campus is a positive predictor of student engagement and learning. Students who live on campus have better access to instructional resources such as faculty members and other students (Kuh,

2003). Residential living also provides students with the opportunity for more interactions with agents of socialization. Living in residence halls also facilitates cognitive development (Pascarella & Terenzini, 1991).

Despite the underlying positive implications associated with on campus living, the actual impact of residency on specific cognitive gains is inconclusive. For instance, freshmen students who live on campus do not experience more significant gains in critical thinking than students who live off campus (Inman & Pascarella, 1998).

Structural Characteristics are significantly related to the academic success of FGs. Fewer FGs live on campus when compared to NFG peers. This results in FGs having fewer opportunities to interact with other students (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Living off campus means FGs tend to have less exposure to other areas of the college experience that would provide a venue for positive interaction with Agents of Socialization. Not living on campus has also been associated with less FG involvement in athletics and community volunteer work than NFGs (Bui, 2002; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Overall, not living on campus negatively affects FGs' academic success (Somers, Woodhouse, & Cofer, 2004).

Structural Characteristics are one factor that affects FG academic success. Their academic success is also affected by the Institutional Environment.

Institutional Environment

Variables within the Institutional Environment are related to NFG and FG academic success (Pascarella & Terenzini, 1991). The Institutional Environment includes daily experiences such as satisfactory interaction with academic and social aspects of the

campus (HERI, 2004a; Eimers, 2001). In addition, variables look at positive comprehensive experiences with the Institutional Environment by examining changes in knowledge and skills (Cheng, 2004; Eimers, 2001; HERI, 2004a; Jackson, Smith, & Hill, 2003).

Daily experiences of first year students include interactions with various academic and support services within the Institutional Environment. Academic interactions include experiencing coursework relevant to everyday life and experiencing quality instruction. Colleges that have Institutional Environments that incorporate these academic experiences into students' daily lives are more likely to promote cognitive gains that lead to academic success (Eimers, 2001)

Student academic success can also be attributed to courses and experiences that inspire new ways of thinking. Students' who are exposed to such experiences and are receptive to them are more likely to see a higher end-of-first-year GPA. Seeking out new experiences allows students to increase critical thinking skills by the end of freshmen year and therefore benefit from cognitive development (Bauer & Liang, 2003).

Classroom practices that are academically engaging promote higher order thinking skills. As an example, course assignments that require the use of library facilities are positively associated with academic success. Institutional Environments that emphasize research intensive activities and manipulating outside sources of research are more likely to see academically successful students (Kuh & Gonyea, 2003).

Daily interaction with support services has been used to predict student success. More specifically, satisfactory interaction with staff in financial aid offices (Furr & Elling, 2002; St. John, 2000) and career services offices (Furr & Elling, 2002; Jackson, Smith, & Hill, 2003) contributes to academic success.

The availability and degree to which students are able to navigate financial aid services indirectly impacts their learning. Students' ability to pay for college and manage debt incurred from attendance can influence all other aspects of the college experience (St. John, 2000). Ultimately, the ability to pay for college will impact student's academic success as it allows them to continue to pursue a postsecondary education (Furr & Elling, 2002).

Similarly, satisfaction with career services influences academic success. Exposure to individuals in careers they wish to pursue increases student confidence and solidifies career choice. This indirectly impacts a student's persistence (Jackson, Smith, & Hill, 2003).

Student commitment to an institution is attributed to the degree to which they are satisfied with the Institutional Environment. The less students experience daily hassles, the more content they are at a particular institution. Students who are pleased with the support they receive on campus are more likely to succeed (Brooks & DuBois, 1995). Believing policies are enforced fairly and approving how institutions communicate standards and academic expectations are correlated with student re-enrollment (Berger & Braxton, 1998).

Daily experiences with academic and student services on college campuses influence academic success among FGs (Bui, 2002; Choy, 1998; Folger, Carter, & Chase, 2004; Inman & Mayes, 1992; Somers, Woodhouse, & Cofer, 2004). Small group exposure to specific academic support services and student affairs offices on college campuses positively impacts satisfaction and institutional commitment among first-year FGs. In addition, academic success is facilitated through personal contact and mentorship. Students' exposure to different offices on campus introduces them to

individuals who serve as resources. FGs who participate in these types of small groups have significantly higher GPAs than those who do not (Folger, Carter, & Chase, 2004).

Student services such as financial aid also impact the success of FGs. FGs are more likely to come from families that have a lower socioeconomic status (Choy, 1998) and indicate financial aid is a major worry (Bui, 2002). Lack of financial resources impacts their ability to become involved in campus events (Bui, 2002; Inman & Mayes, 1992). Ultimately, financial aid has direct implications for FG learning. For every \$1,000 increase in tuition, FGs are less likely to experience academic success. Similarly, accumulated debt load negatively affects the academic success of FGs (Somers, Woodhouse, & Cofer, 2004).

Daily experiences in the Institutional Environment also allow students to develop a sense of community (Cheng, 2004; Eimers, 2000) and close friendships. Positive daily experiences leads to satisfaction with the college environment and promotes academic success (Cheng, 2004; Eimers, 2000). This sense of community allows students to feel cared about and valued as individuals (Cheng, 2004; Eimers, 2000).

Daily experiences that promote a sense of community are also important for FGs. Those who develop a social network are more likely to be academically successful. FGs who have a social support network are also more likely to form relationships with faculty members, identify a mentor, and develop a group of peers to depend on. These variables combine to facilitate academic success (Richardson & Skinner, 1992).

Positive experiences such as acquisition of knowledge (Sedlacek, 2004) and adjusting to demands within the Institutional Environment (Nisbett, Ruble, & Schurr, 1982) occur over the course of the first year. Ultimately, these comprehensive

experiences lead to growth in knowledge in a particular field and predict student academic success (Tinto, 1993).

Institutional Environments that promote the acquisition of knowledge in a particular field of study are positively predictive of academic success. Students who are exposed to such an environment and possess a particular area of expertise experience greater academic success while in college (Sedlacek, 2004).

Students must also be able to adjust to the academic demands within the Institutional Environment to achieve academic success. Variables that indicate students are adapting successfully include developing effective study skills, managing time effectively, and developing an understanding of what professors expect (Nisbett, Ruble, & Schurr, 1982). Academic success is attributed to students who indicate they have learned effective study skills during their exposure to the Institutional Environment during their first year of enrollment. Skills include the ability to read for content, knowing how to take examinations, and understanding how to organize study materials (Nisbett, Ruble, & Schurr, 1982).

Institutional Environments also facilitate changes in analytical and problem solving skills among first year students (Bauer & Liang, 2003; HERI, 2004a; Pascarella & Terenzini, 1991). Analytical and problem solving competencies allow an individual to apply and synthesize information across disciplines. Ultimately, such cognitive gains are necessary for students to be academically successful (HERI, 2004a; Pascarella & Terenzini, 1991).

Affective growth is another area related to student academic success (HERI, 2004a). Institutional Environments that encourage growth in cooperativeness and awareness of others (Kuh, 2003; Furr & Elling, 2002) and increase the leadership and

community orientation of students (Sedlacek, 2004; Ting, 1997; Ting, 2003) promote academic success.

Self-assessed cooperativeness and awareness of others mutually reinforce student learning (Kuh, 2003). Cooperation with peers and awareness of others indicate students are able to work as part of a team and possess knowledge of people from different races/cultures (HERI, 2004a).

For instance, students who experience academic success are more likely to report learning about other races, cultures, sexual lifestyles, or religions (Furr & Elling, 2002). Students who report experiences with diversity are more involved in other engaging educational practices such as collaborative learning that provide exposure to divergent views. These factors coalesce within the Institutional Environment creating greater gains in development (Kuh, 2003).

Leadership and community service are other variables in the Institutional Environment that promote academic success (Sedlacek, 2004; Ting, 1997; Ting, 2003). Leadership experience indicates an individual has familiarity in a role associated with enhanced responsibility. Experiences such as these indirectly facilitate affective growth. Growth due to taking on a leadership role has been shown to be indicative of positive academic success among several groups of nontraditional students including, Latinos, Native Americans, African Americans, and women (Sedlacek, 2004). In particular, FGs who report they possess leadership skills are more likely to have a higher GPA than those who do not report they have such skills (Strage, 1999; Ting, 1998; Ting, 2003).

Experiences in community service represent the ability to engage in a social group, communicate well, establish a relationship in a new community, and accomplish tasks with others in a group (Ting, 2003). Affective growth due to community

involvement positively predicts the academic success of women, Asian Americans, and African American students (Sedlacek, 2004; Ting, 1997; Ting, 2003). Community service is also a strong positive predictor of end-of-first semester GPA among FGs (Ting, 1998; Ting, 2003).

Institutional Environment is comprised of multiple variables linked to academic success (Pascarella & Terenzini, 1991). Student Effort is another factor which influences academic success among NFGs and FGs.

Student Effort

Student Effort is comprised of several variables that promote academic success. The amount of time spent on course work and timeliness turning in assignments are indicators of Student Effort (Bauer & Liang, 2003; Kuh, 1999; Kuh & Hu, 2001).

The amount of effort students put into their work and the time spent on class assignments reflect the degree to which they are engaged in educationally purposeful activities (Bauer & Liang, 2003). Effort on assignments contributes to greater gains over a wide range of learning and personal development outcomes. These outcomes increase the chance students will experience the benefits of academic success (Kuh, 1999; Kuh & Hu, 2001) including a successful end-of first year GPA (Bauer & Liang, 2003).

FGs who demonstrate greater Student Effort during their college experience gain greater rewards than NFGs (Pascarella, Pierson, Wolniak, & Terenzini, 2004). For instance, hours spent studying has a stronger positive effect on FGs' critical thinking skills. The number of written assignments has a stronger positive effect on writing skills, openness to diversity, and self-understanding for FGs than NFGs (Pascarella, Pierson, Wolniak, & Terenzini, 2004).

Students who are organized and efficient see an increase in academic performance (Bauer & Liang, 2003). Alternatively, students who indicate they turn in "sub par" assignments or turn in assignments late demonstrate disengagement. Behaviors such as these put a student's academic success in jeopardy (HERI, 2004a).

Student Effort is related to a student's ability to manage external commitments with competing academic demands. The ability to manage these demands is crucial for academic success. Students who seek balance between external commitments and experiences presented by the college environment are more likely to obtain a successful end-of-first-year GPA (Bauer & Liang, 2003). The manner in which external activities are balanced with school work and time spent on college campuses affects whether students return for the second year (Furr & Elling, 2000; Lundberg, 2004) and their GPA (Bauer & Liang, 2003).

For instance, students who are consumed with establishing social relationships at the expense of attending to academic issues are more likely to see a negative influence on their freshmen year GPA (Bauer & Liang, 2003). Part-time employment (Furr & Elling, 2000; Furr & Elling, 2002; Lundberg, 2004), time spent commuting (McGrath & Braunstein, 1997) and household demands (HERI, 2004a; Kuh, 2003) are additional external commitments that can influence student academic success.

Working off campus interferes with schoolwork and ultimately impacts academic progress (Furr & Elling, 2002; Furr & Elling, 2000; Lundberg, 2004). For instance, students who work more than 20 hours per week off campus may not have the same opportunity to engage in learning from peers or to form quality relationships with faculty. Less time spent on campus can lead to lower satisfaction in peer relationships and fewer

opportunities engagement with faculty and administrators (Furr & Elling, 2000; Lundberg, 2004).

Lower satisfaction among students who work is a pattern that is particularly evident among entering students. First-year students who work more than 20 hours per week off campus are more likely to drop out of college (Furr & Elling, 2002). However, students who work on-campus do not appear to have difficulty maintaining relationships with faculty and getting involved in student organizations (Furr & Elling, 2000).

Time spent commuting also can affect academic success among first-year students (McGrath & Braunstein, 1997). First-year students who commute to campus daily or who leave campus on weekends are more likely to experience negative implications regarding academic success at the end of the freshmen year (McGrath & Braunstein, 1997).

External commitments that affect Student Effort among FGs have to do with balancing employment, household duties, and childcare with school work (Billson & Terry, 1982; Bui, 2002; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). The frequency with which family responsibilities interfere with schoolwork is negatively associated with Student Effort. Students often have difficulty balancing household duties with coursework and that negatively impacts academic success (HERI, 2004a; Kuh, 2003).

Another external commitment negatively associated with Student Effort and academic success among FGs is the relationship they have with their parents (Horn & Nunez, 2000; York-Anderson & Bowman, 1991). Parents of FGs are less likely to provide encouragement to their students. FGs are more likely to come from homes where college is not a high priority. Students from homes where neither parent has a college degree perceive less support from their families for attending college. Students' attempts

to integrate themselves into the institution are mitigated by obligations to maintain relationships with family. Family obligations impede academic progress among FGs (Horn & Nunez, 2000; York-Anderson & Bowman, 1991).

In addition, the type of involvement FGs have with their parents often requires those students to spend more time at home away from the college environment. FGs are often involved with day-to-day matters of their parents' and their family's homelife. For example, FGs are often expected to work and contribute economically to the household. Relationships such as the ones FGs have with their parents often interfere with Student Effort exhibited by FGs and is negatively associated with academic success (York-Anderson & Bowman, 1991).

Employment is an external commitment that negatively correlates with FGs' Student Effort and academic success. First year FGs tend to work more hours per week and are more likely to work full-time (Somers, Woodhouse, & Cofer, 2004). Employment has implications for the time they spend on campus and negatively affects academic progress (Billson & Terry, 1982; Bui, 2002; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996).

Student Effort is negatively affected by variables that illustrate poor social and emotional adjustment. Students who feel worried about their health, unsafe on campus, intimidated by professors, lonely or homesick, worried about meeting new people, depressed, or isolated from campus life demonstrate poor social and emotional adjustment to the college environment (HERI, 2004a; McGrath & Braunstein, 1997).

First-year students who withdraw based on their perceptions of other students illustrate the negative implications of poor social and emotional adjustment (McGrath & Braunstein, 1997). First-year students who do not connect with other students are less

likely to meet new people and are more likely to be academically less successful (McGrath & Braunstein, 1997).

The ability to deal with anxiety and separation from familiar environments are variables associated with Student Effort. An individual must be able to devote the time and energy needed towards the psychological as well as physical demands of the new collegiate environment. Failure to do so is predictive of academic failure (Baker & Siryk, 1986).

Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort are factors that influence the academic success of students. In several instances, variables associated with these factors have been used to predict the academic success of FGs. The academic success of FGs is also related to demographic factors.

Demographic Factors Related to the Academic Success of FGs

The third area the literature explores is demographic characteristics that impact the success of FGs. Race (Richardson & Skinner, 1992; Somers, Woodhouse, & Cofer, 2004), language ability (Kiang, 1992), gender (Bui, 2002; Kiang, 1992; Inman & Mayes, 1999), and financial need (Somers, Woodhouse, & Cofer, 2004) are factors that work in congruence to affect the success of FGs.

In terms of race and ethnicity, FGs are more likely to be African American or Hispanic (Choy, 2001; Nunez & Cuccaro-Alamin, 1998). FGs who are minorities on college campuses report they frequently experience discrimination. Discrimination has been shown to negatively affect adjustment (Richardson & Skinner, 1992). FGs who indicate they are multiethnic also are less likely to experience academic success (Somers, Woodhouse, & Cofer, 2004).

Adjustment problems attributed to race and ethnicity can be compounded if FGs are recent immigrants to the United States or if their parents' are immigrants. English may be a second language for these students. Language ability can pose an additional impediment to academic success. For example, language barriers can make it harder to understand lectures in class and to volunteer information in classroom settings (Kiang, 1992).

Gender is a demographic characteristic that works in conjunction with others to impact FG success. Gender carries more significance among certain cultural groups. For cultural groups that stress traditional gender roles, college attendance for females may not be a priority. There may be little support at home for FGs who are women and the first to attend college (Bui, 2002; Kiang, 1992; Inman & Mayes, 1999).

Financial need has significant implications for the academic success of FGs. Because FGs tend to have greater financial need than other students (Somers, Woodhouse, & Cofer, 2004) they have to work part-time which negatively affects their academic success (King, 2002; Somers, Woodhouse, & Cofer, 2004).

In summary, GPA provides a measure of whether students have been able to adjust to compounding factors that create the college experience. A low GPA indicates students have not responded favorably to Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort (Pascarella & Terenzini, 1991). These students may also be disadvantaged by Background Characteristics they possessed at the time of enrollment (Pascarella & Terenzini, 1991).

Students who are less successful academically are more likely to depart due to institutional policies and the negative stigma associated with academic failure (Allen, 1999; McGrath & Braunstein, 1997). Students who earn a higher GPA indicate they have

responded favorably to these five factors and are more likely to experience continued academic success (Allen, 1999; McGrath & Braunstein, 1997).

Variables associated with Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort have been used to predict academic success (Pascarella & Terenzini, 1991). They have been explored to predict academic success among NFGs and, to some degree, FGs.

Student Background Characteristics such as self-confidence, realistic self-appraisal, and coping mechanisms (Bryson, Smith, & Vineyard 2002; Jackson, Smith, & Hill, 2003; Sedlacek, 2004) are related to student academic success. In particular FGs are more likely to experience academic success if they have self-confidence (Inman & Mayes, 1999; London, 1992) and develop appropriate coping mechanisms (Hahs-Vaughn, 2004; Naumann, Bandalos, & Gutkin, 2003; Riehl, 1994; Ting, 2003).

Exposure to Agents of Socialization is significantly related to NFG academic success. Agents of Socialization includes exposure to both faculty (Clark, Walker, & Keith, 2002; Eimers, 2001; Mayo, Murguia, & Padilla, 1995) and peers (Bauer & Liang, 2003; Kuh & Gonyea, 2003; Kuh & Hu, 2001; Nisbett, Ruble, & Schurr, 1982). Interacting with peers outside of class is also an important Agent of Socialization (Berger & Milem, 2002; Ebberhardt, Rice, & Smith, 2003; Mayo, Murguia, & Padilla, 1995). This includes positive interactions such as involvement in student organizations (Mayo, Murguia, & Padilla, 1995) as well as negative interactions (DeBerard, M.S., Spielmans, & Julka, 2004) that affect academic success. Fewer studies have highlighted how Agents of Socialization directly affect the academic success of FGs (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996).

Structural Characteristics is a factor associated with student academic success (Pascarella, 1985). Living on campus is one area (Pascarella, 1985) that is indirectly associated with academic success among students. This variable has significant implications for FGs. Living on campus allows FGs the opportunity to interact with faculty and students more frequently (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996) promoting academic success.

Daily experiences within the Institutional Environment influence academic success among FGs (Bui, 2002; Choy, 1998; Folger, Carter, & Chase, 2004; Inman & Mayes, 1992; Somers, Woodhouse, & Cofer, 2004). Daily experiences that promote a sense of community and lead to the development of a social network facilitate academic success among FGs (Richardson & Skinner, 1992). Comprehensive experiences such as those that lead to an increase in leadership skills (Ting, 1998; Ting, 2003) promote academic success among FGs.

Student Effort is related to the academic success of FGs (Pascarella, Pierson, Wolniak, & Terenzini, 2004). External commitment such as relationships with parents (Horn & Nunez, 2000; York-Anderson & Bowman, 1991) and balancing employment with school work (Billson & Terry, 1982; Bui, 2002; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996) are negatively associated with FG academic success.

Demographic characteristics of FGs work congruently to impede academic success. FGs are more likely to be minorities on college campuses (Choy, 2001; Nunez & Cuccaro-Alamin, 1998). Minority status can impact their academic success (Richardson & Skinner, 1992). FGs who are minorities and recent immigrants experience additional difficulties related to academic success based on English language ability (Kiang, 1992).

Gender can also negatively impact FGs' academic success (Bui, 2002; Kiang, 1992; Inman & Mayes, 1999). Finally, financial need associated with FG status may affect academic success (King, 2002; Somers, Woodhouse, & Cofer, 2004).

This study sought to address the gap in the literature by examining FGs during the crucial period of adjustment comprised of the first year of full-time enrollment (Bui, 2002; Riehl, 1994; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). I examined how five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) predict the academic success of first year, full-time FGs. Furthermore, this study investigated whether there is a relationship between race, gender, language ability, and financial need and these five factors related to the academic success of FGs.

Chapter Three

Methodology

The purpose of this study was to examine what factors predict the academic success of first-year, full-time first generation students (FGs). This study also examined whether there is a relationship between Race, Gender, Financial Need, and Language Ability and factors used to predict the academic success of FGs.

The present study explored five research questions concerning first generation students:

1. Are there significant differences between more academically successful FGs and FGs who are less successful academically on combinations of five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort)?
2. Is there a relationship between Race and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?
3. Is there a relationship between Gender and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?
4. Is there a relationship between Financial Need and five factors (Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?
5. Is there a relationship between identified Language Ability (native and non-native speakers of English) and five factors (Student Background Characteristics, Agents

of Socialization, Structural Characteristics, Institutional Environment, and Student Effort) used to predict academic success among FGs?

This chapter describes the method employed in the study. A description of the sampling procedure, the instrumentation, and the procedures used to collect and analyze the data follow.

Sample Selection

The sample was identified from respondents who participated in two national studies. The first study included students who completed the CIRP. The CIRP is an instrument that is administered nationally at higher education institutions to incoming first year students by the Higher Education Research Institute (HERI) at University of California, Los Angeles (UCLA). It is designed to elicit information from participants about their demographic characteristics, attitudes, values, beliefs, and expectations of the college experience (HERI, 2004b). Data are reported back to individual institutions. HERI also stores the results of the survey.

The second study included respondents who participated in the *Your First College Year* (YFCY). The YFCY is an instrument that is administered nationally to college students at the end of their freshmen year through HERI. The survey is designed to draw out information about the academic and personal development of first year college students (HERI, 2004a). It examines students' adjustment, as well as specific academic and extracurricular experiences during the course of their first year. Information is collected on student and academic services on campuses that are designed to meet the needs of first year students. Student interactions with faculty and peers are also reported. The survey provides an opportunity for students to self-report their academic achievement and current academic standing. Similar to the CIRP, data collected from the

YFCY are reported back to individual institutions as well as housed at HERI (HERI, 2004).

Criteria for sample selection required using both national surveys, the YFCY and CIRP. Four criteria were used for sample selection.

First year students enrolled for the 2001-2002 academic year could identify themselves as eligible to participate in this study by their response to two items on the CIRP survey (HERI, 2004b). Various definitions of FG exist (York-Anderson & Bowman, 1991). The definition used for this study most accurately depicts FGs that are at the greatest disadvantage in terms of adjustment to the college environment (Horn & Nunez, 2000). To be considered for this study, respondents needed to indicate on the CIRP that parents fell into the following categories of educational attainment: grammar school or less, some high school, high school graduate, postsecondary school other than college (HERI, 2004b).

This study also sought to examine adjustment as it related to enrollment status. The sample only included full-time students. Part-time students are already at a disadvantage for academic success (Pascarella & Terenzini, 1991). An item on the CIRP asks respondents to indicate whether they are enrolling as a full-time or part-time student. This study used only respondents who indicated they were enrolled full-time without any prior postsecondary education experience (HERI, 2004b).

The CIRP instrument, then, enabled me to identify full-time, FGs who enrolled in college in the fall of 2001. Identification numbers students reported on the CIRP was also key to the sample selection process. Sample selection required selecting FGs who completed the YFCY survey (HERI, 2004a). It is possible for HERI to link students' responses from the CIRP to the YFCY via student identification number. FGs needed to

have completed the YFCY in the spring of 2002 as well as the CIRP in the summer of 2001 to be considered for the sample (HERI, 2004a).

To ensure that only data from willing participants were included in the study, one final item on the YCFY was examined. This item asks for consent from participants. Students are asked permission to use their responses if colleges request data for additional research analyses (HERI, 2002). Only those individuals who provided consent were included in the sample.

Sample selection occurred using two primary methods. First, students who completed the 2001 CIRP survey and whose responses revealed they were full-time, FGs were identified. A list of student identification numbers for these FGs was compiled.

Once the list of full-time, first year FG identification numbers from the CIRP was compiled it was cross-referenced with the 2002 YFCY data. FGs, as identified by the CIRP, who also completed the 2002 YFCY comprised the sample for this study.

This nationally representative sample included all FGs who completed the 2002 YFCY survey and met the selection criteria. The sample for the present study included 2,099 first year, full-time FGs.

Instrumentation

The primary instrumentation for the study was the 2002 YFCY (HERI, 2002). A total of nine questions on the YFCY solicit general demographic information from participants. Demographic items include questions that ask for student identification number, gender, racial characteristics, and whether English is their native language. Two demographic questions gather enrollment information. One question asks students what year they first entered college and what year they entered the institution in which they are currently enrolled. The other question asks students to note their enrollment status (full-

time, part-time, not enrolled). Students are asked to indicate their current level of academic success by reporting their grade point average (GPA) from the term they most recently completed. Choices are A (3.75-4.0), A-/B+ (3.25, 3.74), B-/C+ (2.25-3.24), C (1.75-2.24), or C- or less (1.75 or below). Finally, a question asks students what they think they will do in Fall 2002, participants choose: attending their current institution, attending another institution, or not attending any institution (HERI, 2002).

Factors were defined as variables measured by the 2002 *Your First College Year Survey* data (HERI, 2004). Factors were assigned to five main areas: Student Background Characteristics, Agents of Socialization, Structural Characteristics, Institutional Environment, and Student Effort (Pascarella & Terenzini, 1991).

The YFCY instrument includes 143 statements grouped into 15 different sections. The present study examined items as they relate to five factors of student success (Background Characteristics, Student Effort, Agents of Socialization, Structural Characteristics, and Institutional Environment). Therefore, the descriptions of the 15 sections of the instrument that follow are discussed in terms of those five factors. For each section there is a specific format for the questions and associated responses (HERI, 2002).

The first section of the instrument touches on Agents of Socialization and Institutional Environment. Participants are asked how often they interact with people by phone, email, Instant Messenger, or in person. For all responses students indicate the frequency of interaction as measured by a six-point Likert scale. Choices range from interact daily to never interact. The manner in which interaction takes places is gathered from eight items. The first item asks how often participants speak with faculty during office hours. This item is followed by several other statements including how often

participants interact with faculty (outside office hours), academic advisors, and other college personnel. The frequency of peer interaction is solicited by two items. One asks participants how often they communicate with close friends at the institution where they are enrolled. The other item asks how often they communicate with close friends who are not at the same institution (HERI, 2002).

Students rate their satisfaction with components of the Institutional Environment in the next section of the survey that includes 11 items. A six-point Likert scale is used with options ranging from very satisfied to very dissatisfied. Participants also have the option of choosing no experience with a particular aspect of the institution on the Likert scale provided. Three items ask participants to indicate satisfaction with academic areas such as classroom facilities, computer facilities, and library facilities. Satisfaction with academic advising and tutoring are also rated. Next, participants rate their satisfaction with another aspect of the Institutional Environment, student services. Areas such as student housing, financial aid, student health, psychological counseling, and recreational facilities are rated according to participant satisfaction level. The final area freshmen rate according to satisfaction is their experience with orientation for new students (HERI, 2002).

The YFCY asks students to rate the degree to which they have successfully become familiar with the Institutional Environment during their freshmen year. There are four options participants choose to indicate how successful they have been in response to each statement: completely successful, fairly successful, somewhat successful, and unsuccessful. Freshmen are asked to rate themselves in six different areas including: understanding what professors expect of them academically, developing effective study

skills, adjusting to the academic demands of college, managing time effectively, getting to know faculty, and developing close friendships with other students (HERI, 2002).

In another section of the instrument student Background Characteristics are measured. Participants are asked to rate how they compare on select traits in relation to the average person their age. Students rate themselves on a five-point Likert scale that ranges from the highest 10% to the lowest 10%. A total of 12 items are listed. Items ask about student abilities including academic, artistic, computer, leadership, mathematical, public speaking, and writing. Other items ask students to indicate how they perceive themselves in relation to the average person their age in areas such as physical health, emotional health, intellectual self-confidence, social self-confidence, and self-understanding (HERI, 2002).

Interaction with Agents of Socialization, Background Characteristics, Institutional Environment and Student Effort are measured by another section of the survey. Eleven items ask participants to indicate how often they have engaged in various social and academic activities. Students select frequently, occasionally, or not at all for each item in the section. Two items ask how often they attended a religious service or discussed religion. Academic interactions are captured using items that ask them how often they participated in volunteer or community service work and discussed politics. The survey includes indicators of how participants spend time with peers. Items ask how often participants smoked cigarettes, drank beer, and drank wine or liquor. The Institutional Environment is measured by an item that asks how often participants socialized with someone of another racial/ethnic group. Two items gather information on Student Effort by asking freshmen how often they felt overwhelmed by all they had to do and how often they felt depressed during the past year.

Student Background Characteristics are gathered in a section that has a series of items that solicit information about goals and motivations. Eight items ask participants about the personal importance of several areas. Degree of importance is indicated by choosing one of four options: essential, very important, somewhat important, or not important. Students indicate the importance of career aspirations such as becoming an authority in a field, making theoretical contributions to science, and creating artistic work. Information on the importance of social activism is gathered through items that ask participants to indicate the importance of helping others who are in difficulty, influencing social values, and becoming a community leader. Finally, importance of personal aspirations is rated by participants through two items: integrating spirituality into my life and developing a meaningful philosophy in life (HERI, 2002).

The YFCY includes other items that gauge Student Effort and Institutional Environment. A section asks participants to respond to 12 items by indicating how often (frequently, occasionally, rarely, not at all) they experienced either specific feelings or situations. Statements measure how often during the freshmen year students felt lonely, worried about meeting new people, isolated from campus life, unsafe on campus, worried about health, feeling a need to break away from family to succeed in college, and intimidated by professors. Additional items ask how often students were bored in class and how often courses inspired students to think in new ways. Finally, statements in this section look at whether students have been able to balance external commitments with academic demands including: whether job responsibilities, family responsibilities, and social life interfered with schoolwork (HERI, 2002).

Structural Characteristics of the institution as it relates to the student's college experience is solicited from an item that asks participants to describe their living

arrangements during the past year. Freshmen participants may choose campus housing (college residence hall, suite, or other campus housing), private home/apartment, or other (HERI, 2002).

Institutional Environment is measured in a section with a variety of items that ask students to indicate how often (frequently, occasionally, rarely, not at all) certain activities were included in courses during their freshmen year. Group discussions, student presentations, formal lectures, research projects, multiple drafts of written work, group projects, weekly essay assignments, student evaluations of each other's work, field experiences, community service linked to coursework, student selected topics, laboratory component, and required on-line interaction with professors and classmates are the 13 items addressed in this section (HERI, 2002).

Several factors related to academic success are measured in another section of the instrument including Background Characteristics, Agents of Socialization, Structural Characteristics, and Institutional Environment. Eight items ask participants to indicate whether they have changed their career plans, decided to pursue a different major, declared a major, joined a social fraternity or sorority, enrolled in an honors course, participated in varsity athletics, enrolled in remedial courses, or transferred from another institution. In two final items students indicate if they have taken a college course or seminar specifically designed to help them adjust to college and enrolled in a formal program where a group of students takes two or more courses together (HERI, 2002).

The YFCY includes a section with 13 items that seek to measure Student Effort and Institutional Environment. Participants indicate how often (frequently, occasionally, rarely, not at all) they turned in assignments late, skipped class, came to class late, and turned in course assignments that did not reflect their best work. Participants are asked to

indicate how often they spoke up in class, discussed course content outside of class with students, studied with other students, worked with a professor on a research project, used the Internet for research or homework, and received tutoring. Students also indicate how often they participated in intramural sports, had difficulty getting along with roommates/housemates and how often they sought personal counseling (HERI, 2002).

A section on the YFCY measures whether exposure to the Institutional Environment facilitated cognitive and affective growth during the first year of college (12 items). Participants are asked to compare how they rate currently in comparison to how they rated when they entered college. Students rate themselves on a five-point Likert scale ranging from much stronger to much weaker. Items include cognitive areas such as general knowledge, analytical and problem solving skills, knowledge in a field or discipline, critical thinking skills, and library/research skills. Changes in affective areas such as knowledge of different races or cultures, religious beliefs and convictions, ability to get along with others, ability to work as part of a team, understanding problems in community, national issues, and global issues are also included in the section (HERI, 2002).

One question asks participants if they have concerns about financing their college education. Students have three options they may choose from, one being that they have no concern about financing their education. The other two options are some concern and major concerns (HERI, 2002).

Student Effort and Agents of Socialization are measured in a section that has 16 items that ask participants the hours per week (none, less than one hour, 1-2, 3-5, 6-10, 11-15, 16-20, 21-20, over 30) they spend engaged in certain activities. Social activities such as socializing with friends, partying, participating in student clubs, exercising, and

communicating via e-mail and Instant Messenger are included. Prayer/meditation, reading for pleasure, surfing the Internet, playing video games, and watching TV are other items that examine how students spend their time. There are also items that measure whether external commitments prevent students from engaging in academic and social events. Items include the time spent each week working for pay on campus, working for pay off campus, household/childcare duties, and commuting (HERI, 2002).

Finally, the YFCY includes a section that asks students to rate their satisfaction with seven items related to the Institutional Environment. The five-point Likert scale has options ranging from very satisfied to very dissatisfied. Items include amount of contact with faculty, opportunities for community service, relevance of coursework to everyday life, relevance of coursework to future career plans, overall quality of instruction, overall sense of community among students, and overall college experience (HERI, 2002). A complete copy of the YFCY appears in Appendix A.

Reliability and Validity

Reliability addresses the degree to which an instrument elicits consistent responses (Hinkle, Wiersma, & Jurs, 1988; Suskie, 1996). Different types of reliability can be assessed. For instance, test-retest reliability is an important consideration. Validity addresses the degree to which an instrument accurately measures what it is supposed to measure (Hinkle, Wiersma, & Jurs, 1988; Suskie, 1996). Construct and content validity are two assessments used to determine whether an instrument is valid.

The reliability and validity of the YFCY were established by HERI. The steps taken by HERI regarding the psychometric properties of the instrument are described in this section. A “split-half” reliability analysis was performed to determine reliability coefficients for items on the YFCY. Institutions, rather than individuals, were treated as

the unit of analysis. This method was used because YFCY data are most often reported as national or institutional aggregates (e.g., the percentage of first-year students who are satisfied with college or agree with a particular value statement). Therefore, respondents were randomly divided into two groups per institution. Item-by-item means were calculated for each group and then reliability coefficients were calculated for all items by correlating the means across the institutional sub-samples. Reliability coefficients ranged from .10 to .97 with an average reliability coefficient of .56 (personal communication with HERI, 2004). The complete statement provided by HERI regarding the reliability and validity of the instrument is included in Appendix B.

Regarding validity of the YFCY, HERI focused on two measures of validity: construct validity and content validity. In assessment of validity, the unit of analysis was the student rather than the institution (personal communication with HERI, 2004).

Construct validity of the YFCY instrument was established by conducting a principal components factor analysis of all of the items on the survey. Principal components factor analysis was conducted to determine if survey items that appear to relate to one another actually do cluster statistically (personal communication with HERI, 2004).

Nineteen factors were extracted and rotated using varimax rotation techniques. Even after dropping survey items that loaded at less than .40, more than 100 items from the YFCY instrument were included in these factors. Chronbach's alpha values ranged from .31 to .89 (personal communication with HERI, 2004).

Content validity on the YFCY was established through use of an expert panel. The panelists were familiar with the constructs that the survey measures. Experts were second-year students at UCLA who had completed their first year of college in Spring

2001. Students were invited to participate in one of three focus groups. In each focus group, participants were asked to complete a set of survey questions and then asked to reflect on the clarity and relevance of each question and stem. Additionally, participants were asked to explain their understanding of the response options. Feedback from students in the focus groups indicated a high degree of content validity for the YFCY instrument (personal communication with HERI, 2004).

Reliability and validity procedures were conducted by HERI using a nationally representative sample of both NFGs and FGs. This study used a sub-set of the national data that included only FGs. Therefore, additional steps needed to be taken on the sub-set of the data being used for this study to ensure reliability and validity. Those steps will be described in the Data Analysis section of this chapter.

Data Collection Procedure

Data collection required several steps. First, it was necessary to obtain approval from the Institutional Review Board for Research Involving Human Subjects (IRB) at the researcher's institution (See Appendix C). Once IRB approval was obtained, data collection was a multi-step process.

National data from the 2002 YFCY are stored by HERI at UCLA. I submitted a letter and detailed research proposal to HERI asking for access to the subset of the national data sample that would be needed to complete this study.

The proposal included a brief literature review, purpose of the study and research questions. Specifications for the sample selection criteria were also included in the proposal. I asked for data from YFCY participants who were full-time students and whose parents had not completed a bachelor's degree.

Access to the national data sample was granted by HERI. At HERI's request, I signed a consent form for data use. The form was faxed to HERI and once it was received the data sample was sent via email in an SPSS file according to specifications outlined in the research proposal.

Data Analysis Procedure

Data analysis for this study consisted of several procedures. Since this study used a subset of the national data set, a separate factor analysis was run to ensure reliability and validity. A combination of descriptive statistics and logistic regression was used to analyze the data. SPSS, a statistical software package, generated frequency distributions, means, and logistic regression models.

In preparation for data analysis, a factor analysis was conducted using only the 2,099 FGs who comprised the sample for this study. Factor analysis was used for the 143 items on the YFCY to determine if clusters existed and the number of factors could be reduced (Cramer, 2003; Green & Salkind, 2003). Steps involved in conducting the factor analysis were similar to those used by HERI on the national sample with two notable exceptions.

First, GPA served as the dependent variable for this study. The sample of FG students was divided into two categories based on their response to the 2002 YFCY survey question asking them their GPA (HERI, 2004). The first category was comprised of FGs who indicated they were more successful during their first year of college. The second category was comprised of FGs who indicated they were academically less successful. Greater academic success was defined as a GPA of 1.75 or better. A GPA of below a 1.75 or lower was defined as academically less successful. Therefore, GPA was not included in the factor analysis conducted on the FG sample.

HERI's factor analysis on responses from all participants in the 2002 YFCY study revealed 19 factors. (refer to Table 1). My study grouped factors related to academic success according to Pascarella and Terenzini's model (1991). Therefore, rather than using 19 factors I requested five factors using SPSS. The 19 factors were predicted to load on one of the five factors related to academic success.

Factor analysis on the data set for this study was conducted using a Varimax rotation procedure (Cramer, 2003; Green & Salkind, 2003). The analysis revealed five factors that included 80 of the 143 survey items from the 2002 YFCY.

Table 2 describes the original 19 factors from HERI's factor analysis and explains which of the five factors each variable from the YFCY was predicted to load on based on Pascarella and Terenzini's model (1991). Several of the variables did not load as predicted. Table 2 explains whether the variables either loaded on a different factor or did not load on any of the five.

Table 3 identifies what variables are associated with each of the five factors based on the factor analysis conducted on the data set for this study. The factor loading score is provided for each item (Cramer, 2003; Green & Salkind, 2003). Sixty three (63) items did not load on any factors. The small number of students who responded to these items may be the reason they did not load on any factor. A complete list of the items from the 2002 YFCY and the associated factors used in this study are included in Table 4. Consistency in scores among items that had a loading of at least .3 (Chronbach's alpha) for each factor is also provided in Table 4 (Cramer, 2003; Green & Salkind, 2003). Once the factor analysis was complete sample characteristics were described through the use of frequency distributions and percentages on the demographic variables: Race, Gender, Financial Need, and Language Ability.

Table 1

Correlations between YFCY Items and 19 Factors using 2002 YFCY Data based on National Sample Provided by HERI

Factor and Variable	Factor Loading
Satisfaction with College (Cronbach's alpha = .83)	
Satisfaction: Relevance of coursework to everyday life	.70
Satisfaction: Overall quality of instruction	.70
Satisfaction: Relevance of coursework to future career plans	.68
Satisfaction: Amount of contact with faculty	.64
Satisfaction: Opportunities for community service	.57
Satisfaction: Overall sense of community among students	.56
Satisfaction: Overall college experience	.54
Change in Understanding of Local & Global Issues (Cronbach's alpha = .83)	
Self-rated change: Understanding of national issues	.90
Self-rated change: Understanding of global issues	.89
Self-rated change: Understanding of community problems	.53
Self Confidence (Cronbach's alpha = .82)	
Self-rating: Social self-confidence	.75
Self-rating: Self-understanding	.71
Self-rating: Intellectual self-confidence	.71
Self-rating: Leadership ability	.65
Self-rating: Public speaking ability	.62
Self-rating: Emotional health	.62
Satisfaction with Campus Facilities and Services (Cronbach's alpha = .80)	
Satisfaction: Computer facilities	.68
Satisfaction: Classroom facilities	.67
Satisfaction: Library facilities and other services	.66
Satisfaction: Tutoring and other academic assistance	.58
Satisfaction: Student health center/services	.51
Satisfaction: Financial aid services	.51
Satisfaction: Psychological counseling services	.46

Table 1 (*continued*)

Factor and Variable	Factor Loading
Academic Success (Cronbach's alpha = .77)	
Self-rated success: Adjusting to academic demands of college	.77
Self-rated success: Developing effective study skills	.74
Self-rated success: Managing your time effectively	.71
Self-rated success: Understanding what professors expect	.62
Current GPA	.45
Self-Assessed Cognitive Development (Cronbach's alpha = .77)	
Self-rated change: Analytical and problem-solving skills	.73
Self-rated change: Critical thinking skills	.71
Self-rated change: General knowledge	.68
Self-rated change: Knowledge of a particular field or discipline	.62
Frequency: Courses inspired me to think in new ways	.45
Religiousness and Spirituality (Cronbach's alpha = .76)	
Frequency: Attended a religious service	.77
Hours per week spent praying/meditating	.72
Goal: Integrate spirituality into life	.70
Frequency: Discussed religion	.58
Self-rated change: Religious beliefs and convictions	.58
Student-Centered Classroom Practices (Cronbach's alpha = .75)	
Frequency: Multiple drafts of written work	.74
Frequency: Student evaluations of each others work	.65
Frequency: Weekly essay assignments	.64
Frequency: Research projects	.61
Frequency: Group projects	.47
Frequency: Student presentations/Performances	.45
Frequency: Group discussions	.41
Leadership and Community Orientation (Cronbach's alpha = .75)	
Goal: Influence social values	.70
Goal: Help promote racial understanding	.65
Goal: Help others in difficulty	.63
Goal: Become a community leader	.63

Table 1 (*continued*)

Factor and Variable	Factor Loading
Goal: Become authority in own field	.54
Goal: Develop meaningful philosophy of life	.48
Poor Social and Emotional Adjustment (Cronbach's alpha = .73)	
Frequency: Felt worried about health	.63
Frequency: Felt unsafe on this campus	.60
Frequency: Felt intimidated by professors	.59
Frequency: Felt lonely or homesick	.56
Frequency: Felt worried about meeting new people	.54
Frequency: Felt depressed	.49
Frequency: Felt isolated from campus life	.48
Partying and Socializing (Cronbach's alpha = .71)	
Frequency: Drank beer	.83
Frequency: Drank wine or liquor	.81
Hours per week spent partying	.76
Frequency: Smoked cigarettes	.63
Hours per weeks spent socializing with friends	.43
Interaction with Faculty and Staff (Cronbach's alpha = .68)	
Interacted with faculty during office hours	.74
Interacted with faculty outside of office hours	.72
Interacted with academic advisors or counselors	.62
Interacted with other college personnel	.57
Interacted with TA's during office hours	.49
Academic Disengagement (Cronbach's alpha = .67)	
Frequency: Came late to class	.72
Frequency: Skipped class	.64
Frequency: Turned in "sub par" assignments	.58
Frequency: Turned in course assignment late	.55
External Commitments (Cronbach's alpha = .64)	
Hours per week spent working (for pay) off campus	.70
Hours per week spent commuting	.69

Table 1 (*continued*)

Factor and Variable	Factor Loading
Hours per week performing household/childcare duties	.63
Frequency: That family responsibilities interfered w/schoolwork	.52
Frequency: That job responsibilities interfered w/schoolwork	.51
Familiarity with Computer Technology (Cronbach's alpha = .63)	
Hours per week spent surfing the internet	.81
Hours per week spent communicating via internet	.74
Hours per week spent playing video/computer games	.53
Self-rating: Computer skills	.43
Self-Assessed Cooperativeness and Awareness of Others (Cronbach's alpha = .61)	
Self-rated change: Ability to get along with others	.65
Self-rated change: Ability to work as part of a team	.64
Self-rated change: Knowledge of different races/cultures	.53
Academic Abilities (Cronbach's alpha = .60)	
Self-rating: Academic ability	.68
Self-rating: Mathematical ability	.66
Enrolled in honors course	.51
Current GPA	.47
Physical Health and Athletic Involvement (Cronbach's alpha = .58)	
Hours per week spent exercising or participating in sports	.77
Participated in varsity/intercollegiate athletics	.74
Self-rating: Physical health	.57
Frequency: Participated in intramural sports	.54
Interaction with Fellow Students (Cronbach's alpha = .56)	
Frequency: Studied with other students	.68
Frequency: Discussed course content with students outside of class	.61
Hours per week participating in student clubs/groups	.61
Frequency: Participated in volunteer or community service work	.58
Self-rated success: Developing close friendships	.57
Joined a social fraternity or sorority	.42

Table 2

98 YFCY Items from Fall 2002 Dataset, Predicted FG Factor, Actual Assignment of Item to FG Factor, and Items that Did Not Load on Any FG Factor

2002 HERI Factors Variable	Predicted FG Factor	Loads on Other Factors	Does Not Load on FG Factor
Satisfaction with College			
Satisfaction: Relevance of coursework to everyday life	IE		
Satisfaction: Overall quality of instruction	IE	IE	
Satisfaction: Relevance of coursework to future career plans	IE		
Satisfaction: Amount of contact with faculty	IE		
Satisfaction: Opportunities for community service	IE	IE	
Satisfaction: Overall sense of community among students	IE		
Satisfaction: Overall college experience	IE	IE	
Change in Understanding of Local & Global Issues			
Self-rated change: Understanding of national issues	IE		
Self-rated change: Understanding of global issues	IE		
Self-rated change: Understanding of community problems	IE		
Self Confidence			
Self-rating: Social self-confidence	BC		
Self-rating: Self-understanding	BC		
Self-rating: Intellectual self-confidence	BC		
Self-rating: Leadership ability	BC		

Table 2 (*continued*)

2002 HERI Factors Variable	Predicted FG Factor	Loads on Other Factors	Does Not Load on FG Factor
Self-rating: Public speaking ability	BC		
Self-rating: Emotional health	BC		
Satisfaction with Campus Facilities and Services			
Satisfaction: Computer facilities	IE		
Satisfaction: Classroom facilities	IE		
Satisfaction: Library facilities and other services	IE		
Satisfaction: Tutoring and other academic assistance	IE		X
Satisfaction: Student health center/services	IE		X
Satisfaction: Financial aid services	IE		X
Satisfaction: Psychological counseling services	IE		X
Academic Success			
Self-rated success: Adjusting to academic demands of college	SE		
Self-rated success: Developing effective study skills	SE		
Self-rated success: Managing your time effectively	SE		
Self-rated success: Understanding what professors expect	SE		
Current GPA	-		
Self-Assessed Cognitive Development			
Self-rated change: Analytical and problem-solving skills	IE		
Self-rated change: Critical thinking skills	IE		
Self-rated change: General knowledge	IE		
Self-rated change: Knowledge of a particular field or discipline	IE		

Table 2 (*continued*)

2002 HERI Factors Variable	Predicted FG Factor	Loads on Other Factors	Does Not Load on FG Factor
Frequency: Courses inspired me to think in new ways	IE		
Religiousness and Spirituality			
Frequency: Attended a religious service	BC		X
Hours per week spent praying/meditating	BC		X
Goal: Integrate spirituality into life	BC		
Frequency: Discussed religion	BC		X
Self-rated change: Religious beliefs and convictions	BC		X
Student-Centered Classroom Practices			
Frequency: Multiple drafts of written work	IE		X
Frequency: Student evaluations of each others work	IE		X
Frequency: Weekly essay assignments	IE		X
Frequency: Research projects	IE		
Frequency: Group projects	IE		
Frequency: Student presentations/Performances	IE		X
Frequency: Group discussions	IE		
Leadership and Community Orientation			
Goal: Influence social values	BC		
Goal: Help promote racial understanding	BC		X

Table 2 (*continued*)

2002 HERI Factors Variable	Predicted FG Factor	Loads on Other Factors	Does Not Load on FG Factor
Goal: Help others in difficulty	BC	IE	
Goal: Become a community leader	BC	IE	
Goal: Become authority in own field	BC	IE	
Goal: Develop meaningful philosophy of life	BC		X
Poor Social and Emotional Adjustment			
Frequency: Felt worried about health	SE		
Frequency: Felt unsafe on this campus	SE		
Frequency: Felt intimidated by professors	SE		
Frequency: Felt lonely or homesick	SE		
Frequency: Felt worried about meeting new people	SE		
Frequency: Felt depressed	SE		
Frequency: Felt isolated from campus life	SE		
Partying and Socializing			
Frequency: Drank beer	AS		
Frequency: Drank wine or liquor	AS		
Hours per week spent partying	AS		
Frequency: Smoked cigarettes	AS		
Hours per weeks spent socializing with friends	AS		
Interaction with Faculty and Staff			
Interacted with faculty during office hours	AS	IE	

Table 2 (continued)

2002 HERI Factors Variable	Predicted FG Factor	Loads on Other Factors	Does Not Load on FG Factor
Interacted with faculty outside of office hours	AS	IE	
Interacted with academic advisors or counselors	AS	IE	
Interacted with other college personnel	AS	IE	
Interacted with TA's during office hours	AS	IE	
Academic Disengagement			
Frequency: Came late to class	SE		
Frequency: Skipped class	SE	AS	
Frequency: Turned in "sub par" assignments	SE		
Frequency: Turned in course assignment late	SE		
External Commitments			
Hours per week spent working (for pay) off campus	SE	SC	
Hours per week spent commuting	SE	SC	
Hours per week performing household/childcare duties	SE	SC	
Frequency: That family responsibilities interfered w/schoolwork	SE		
Frequency: That job responsibilities interfered w/schoolwork	SE		
Familiarity with Computer Technology			
Hours per week spent surfing the internet	SE		X
Hours per week spent communicating via internet	SE		X
Hours per week spent playing video/computer games	SE		X
Self-rating: Computer skills	BC		X

Table 2 (*continued*)

2002 HERI Factors Variable	Predicted FG Factor	Loads on Other Factors	Does Not Load on FG Factor
Self-Assessed Cooperativeness and Awareness of Others			
Self-rated change: Ability to get along with others	IE		
Self-rated change: Ability to work as part of a team	IE		
Self-rated change: Knowledge of different races/cultures	IE		
Academic Abilities			
Self-rating: Academic ability	BC		X
Self-rating: Mathematical ability	BC		X
Enrolled in honors course	BC		X
Current GPA	-		
Physical Health and Athletic Involvement			
Hours per week spent exercising or participating in sports	AS		
Participated in varsity/intercollegiate athletics	AS		
Self-rating: Physical health	BC	BC	
Frequency: Participated in intramural sports	AS		
Interaction with Fellow Students			
Frequency: Studied with other students	IE		
Frequency: Discussed course content with students out of class	IE		
Hours per week participating in student clubs/groups	IE	IE	
Frequency: Participated in volunteer or community service work	IE	IE	
Self-rated success: Developing close friendships	AS		X

Joined a social fraternity or sorority AS X

Note: IE = Institutional Environment BC = Background Characteristics AS = Agents of Socialization SE = Student Effort SC = Structural Characteristics

Table 3

2002 YFCY Loadings on Five FG Factors Based on Responses from FGs (N= 2,099)

Items	IE Factor 1	SE Factor	BC Factor 3	AS Factor 4	SC Factor 5
Interacted with faculty during office hours	.306				
Interacted with faculty outside of office hours	.322				
Interacted with other college personnel	.308				
Interacted with your family					-.342
Satisfaction: Classroom facilities	.458				
Satisfaction: Computer facilities	.303				
Satisfaction: Library facilities and services	.313				
Satisfaction: Academic advising	.385				
Satisfaction: Student housing					.664
Satisfaction: Orientation for new students	.348				
Self-rated success: Understanding what professors expect		-.411			
Self-rated success: Developing effective study skills		-.421			
Self-rated success: Adjusting to academic demands		-.442			
Self-rated success: Managing time effectively		-.408			
Self-rated success: Getting to know faculty	.422				
Self-rated success: Developing close friendships with students				.305	
Self-rating: Emotional health			-.449		
Self-rating: Leadership ability			.641		
Self-rating: Physical health		-.333			
Self-rating: Public speaking ability			.580		
Self-rating: Intellectual self-confidence			.630		
Self-rating: Social self-confidence			.660		

Table 3 (continued)

Items	IE Factor 1	SE Factor 2	BC Factor 3	AS Factor 4	SC Factor 5
Self-rating: Self-understanding			.573		
Self-rating: Writing ability			.348		
Frequency: Smoked cigarettes				.343	
Frequency: Drank beer				.721	
Frequency: Drank wine or liquor				.690	
Frequency: Felt overwhelmed		.402			
Frequency: Felt depressed		.526			
Goal: Becoming authority in own field			.329		
Goal: Influencing social values	.326		.387		
Goal: Helping others in difficulty	.338				
Goal: Becoming a community leader					
Goal: Integrating spirituality into life			.328		
Frequency: Felt lonely or homesick		.426			
Frequency: Felt worried about meeting new people		.319			
Frequency: Felt isolated from campus life		.369			
Frequency: Felt need to break away from family to succeed		.311			
Frequency: Felt unsafe on this campus		.356			
Frequency: Felt worried about health		.436			
Frequency: Felt intimidated by professors		.433			
Frequency: Felt courses inspired new thinking	.424				
Frequency: Felt job interfered with schoolwork		.323			
Frequency: Felt family interfered with schoolwork		.368			
Frequency: Felt social life interfered with schoolwork		.366			

Table 3 (continued)

Items	IE Factor 1	SE Factor 2	BC Factor 3	AS Factor 4	SC Factor 5
First Year Primary Living Place					-.812
Frequency: Group discussions	.358				
Frequency: Student presentations and performances	.364				
Frequency: Research projects	.309				
Group Projects	.346				
Frequency: Community service linked to coursework	.330				
Frequency: Student-selected topics	.351				
Frequency: Turned in course assignment late		.350			
Frequency: Spoke up in class			.416		
Frequency: Discussed courses with other students	.335				
Frequency: Studied with other students	.316				
Frequency: Came late to class		.306		.400	
Frequency: Skipped class					
Frequency: Turned in "subpar" assignments		.392		.300	
Participated in intramural sports		.309			
Didn't get along with roommate(s)					
Self-rated change: General knowledge	.434				
Self-rated change: Analytical and problem-solving skills	.430				
Self-rated change: Knowledge of particular field	.427				
Self-rated change: Critical thinking skills	.487				
Self-rated change: Knowledge of different races/cultures	.367				
Self-rated change: Ability to get along with others	.409				
Self-rated change: Library/research skills	.388				
Self-rated change: Ability to work as part of team	.437				

Table 3 (continued)

Items	IE Factor 1	SE Factor 2	BC Factor 3	AS Factor 4	SC Factor 5
Self-rated change: Understanding of community problems	.447				
Self-rated change: Understanding of national issues	.362				
Self-rated change: Understanding of global issues	.348				
Hours per week spent socializing with friends				.510	
Hours per week spent exercising or sports				.401	
Hours per week spent partying				.749	
Hours per week spent working for pay off campus					-.581
Hours per week spent on household/childcare duties					-.492
Hours per week spent commuting					-.644
Satisfaction: Amount of contact with faculty	.526				
Satisfaction: Opportunities for community service	.466				
Satisfaction: Relevance of coursework to life	.601				
Satisfaction: Relevance of coursework to career	.585				
Satisfaction: Overall quality of instruction	.590				
Satisfaction: Overall sense of community among students	.456				
Satisfaction: Overall college experience	.478				

1 = Institutional Environment 2 = Student Effort 3 = Background Characteristics 4 = Agents of Socialization

5 = Structural Characteristics

Table 4

Factor Analysis Results 2002 YFCY Data Using FGs

Factor and Variable	Highest Factor Loading Above .300
Institutional Environment (Cronbach's alpha = .88)	
Interacted with faculty during office hours	.306
Interacted with faculty out of office hours	.322
Interacted with other college personnel	.308
Satisfaction: Classroom facilities	.458
Satisfaction: Computer facilities	.303
Satisfaction: Library facilities/services	.313
Satisfaction: Academic advising	.385
Satisfaction: Orientation for new students	.348
Self-rated success: Getting to know faculty	.422
Goal: Helping others in difficulty	.326
Frequency: Courses inspired new thinking	.424
Frequency: Group discussions	.358
Frequency: Student presentations/performances	.364
Frequency: Research projects	.309
Frequency: Group projects	.346
Frequency: Community service linked to coursework	.330
Frequency: Student-selected topics	.351
Frequency: Discussed course with other students	.335
Frequency: Studied with other students	.316
Self-rated change: General knowledge	.434
Self-rated change: Analytical/problem-solving skills	.430
Self-rated change: Knowledge of particular field	.427
Self-rated change: Critical thinking skills	.487
Self-rated change: Knowledge of different races/cultures	.367
Self-rated change: Ability to get along with others	.409
Self-rated change: Library/research skills	.388
Self-rated change: Ability to work as part of a team	.437
Self-rated change: Understanding of community problems	.447
Self-rated change: Understanding of national issues	.362
Self-rated change: Understanding of global issues	.348

Table 4 (*continued*)

Factor and Variable	Factor Loading
Satisfaction: Amount of contact with faculty	.526
Satisfaction: Opportunities for community service	.466
Satisfaction: Relevance of coursework to life	.601
Satisfaction: Relevance of coursework to career	.585
Satisfaction: Overall quality of instruction	.590
Satisfaction: Overall sense of community among students	.456
Satisfaction: Overall college experience	.478
Student Effort (Cronbach's alpha = .59)	
Self-rated Success: Understanding what professors expect	-.411
Self-rated Success: Developing effective study skills	-.421
Self-rated Success: Adjusting to academic demands	-.442
Self-rated Success: Managing time effectively	-.408
Self-rating: Physical Health	-.333
Didn't get along with roommate(s)	.309
Frequency: Turned in "subpar" assignments	.392
Frequency: Came late to class	.306
Frequency: Turned in course assignment late	.350
Frequency: Social life interfered with schoolwork	.366
Frequency: Felt lonely or homesick	.426
Frequency: Felt worried about meeting new people	.319
Frequency: Felt isolated from campus life	.369
Frequency: Felt need to break away from family to succeed	.311
Frequency: Felt unsafe on this campus	.356
Frequency: Felt worried about health	.436
Frequency: Felt intimidated by professors	.433
Frequency: Felt overwhelmed	.402
Frequency: Felt depressed	.526
Frequency: Job interfered with schoolwork	.323
Frequency: Family interfered with schoolwork	.368

Table 4 (continued)

Factor and Variable	Factor Loading
Background Characteristics (Cronbach's alpha = .83)	
Frequency: Spoke up in class	.416
Goal: Integrating spirituality into life	.328
Goal: Becoming authority in own field	.329
Goal: Influencing social values	.387
Goal: Becoming a community leader	.470
Self-rating: Emotional health	.449
Self-rating: Leadership ability	.641
Self-rating: Public speaking ability	.580
Self-rating: Intellectual self-confidence	.630
Self-rating: Social self-confidence	.660
Self-rating: Self-understanding	.573
Self-rating: Writing ability	.348
Agents of Socialization (Cronbach's alpha = .71)	
Self-rated success: Developing close friendships with students	.305
Hours per week spent socializing with friends	.510
Hours per week spent exercising or sports	.401
Hours per week spent partying	.749
Participated in intramural sports	.300
Frequency: Skipped class	.400
Frequency: Smoked cigarettes	.343
Frequency: Drank beer	.721
Frequency: Drank wine or liquor	.690
Structural Characteristics (Cronbach's alpha = .22)	
Frequency: Interacted with close friends elsewhere	-.342
First Year Primary Living Place	-.812
Hours per week: Working for pay off-campus	-.581

Table 4 (*continued*)

Factor and Variable	Factor Loading
Hours per week: Household/childcare duties	-.492
Satisfied with: Student Housing	.664
Hours per week spent: Commuting	-.644

Logistic regression was used to determine whether the five factors are significant predictors of academic success among FGs. Logistic regression was used because the dependent variable (more academically successful, less successful academically) was a dichotomous variable (Green & Salkind, 2003).

Randomly selected split-halves was used to create the logistic regression sample. To address the first research question the data were run to identify regression models for academically more successful and academically less successful FGs. Logistic regression allowed me to determine whether there were significant differences between academically more successful and academically less successful FGs on the five factors (Green & Salkind, 2003).

Next, logistic regression was used to address the remaining research questions. Four additional regression models were conducted. In each case, one demographic variable (Race, Gender, Financial Need, Language Ability) was added to each of the models generated to address the research questions. The technique allowed me to determine whether there is a relationship between Race, Gender, Financial Need, and Language Ability and factors related to academic success among FGs (Green & Salkind, 2003).

In conclusion, the purpose of this study was to examine what factors predict the academic success of first-year, full-time FGs. Furthermore, this study examined whether there is a relationship between Race, Gender, Financial Need, and Language Ability and factors related to academic success among FGs. The methodology described in this chapter was deemed sufficient to address the research questions posed in the study.

Chapter Four

Results of Study

The purpose of this chapter is to report the findings from the data analysis, following the procedures outlined in Chapter Three. First, the sample is described by looking at participants in relation to characteristics the literature indicates are associated with first generation students (FGs). This is followed by an examination of the demographic variables as they pertain to the respondents of this study. Then findings related to each of the five research questions are described.

Characteristics Associated with First Generation Students

The data set for this study provided an opportunity to look at the entering characteristics of the 2,099 FGs who comprised the sample. However, the number of FGs in higher education in general is much higher and these respondents might have differed in some important ways from other FGs. The literature describes ways in which FGs may be at a disadvantage for academic success during their first-year of college due to characteristics they possess prior to enrollment. The sample for this study was examined to determine whether they reflected some of those same characteristics.

As noted previously, the sample for this study was a sub-set of those who participated in the Fall 2001 administration of the *Cooperative Institutional Research Program* (CIRP) survey and the Spring 2002 administration of the *Your First College Year* (YFCY) survey. Both surveys are administered by the Higher Education Research Institute (HERI). The CIRP served primarily to identify the FGs included in this sample as that is the one of these two surveys that asks participants to report the education level of their parents.

