

ABSTRACT

Title of Dissertation: CHARACTERISTICS OF SUCCESSFUL COMMUNITY
COLLEGE STUDENTS

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Community College Leadership

The purpose of this quantitative study was to find predictors of student success. Using a predictive correlational design, the intent of the study was to find the relationships between the dichotomous dependent variable with the categories, degree recipients and non-degree recipients, and the independent variables, student characteristics and risk factors. The conceptual framework for this study was Astin's Input-Environment-Outcome (I-E-O) model which addresses the complexities of research in higher education by highlighting the interdependence between inputs, environments, and outputs. The use of a predictive design allowed the researcher to find the likelihood of a relationship between outcomes by using the independent variables as predictors.

To address the research questions descriptive statistics, bivariate cross tabulations, and binary logistic regression were conducted. The descriptive statistics were reported from the participants' responses and the percentage of the total response. The bivariate cross tabulations measured the relationship between the expected and observed counts for the two categories. During the analysis only the significant categorical variables were retained and entered into SPSS using the default enter mode. The distinguishing characteristics of successful community college students were found in the student characteristics age, race, and parents' education. The

distinguishing characteristics of risk factors were found in delayed enrollment, dependents, and part-time enrollment. Specifically, the predictors for participants who earned the associate degree consisted of a non-traditional aged student, who is White, with a parent who graduated from college or higher, had a minimal delay in entry into the community college, was enrolled part-time, and did not have dependents. Implications from practice to policy are presented in relation to how the community college should strengthen its focus on the traditional aged student who is a minority, the first in the family to attend college, has a minimal delay in their entry into college, enrolls full-time, and has dependents.

CHARACTERISTICS OF SUCCESSFUL COMMUNITY COLLEGE STUDENTS

by

Scheherazade West Forman

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CHARACTERISTICS OF SUCCESSFUL
COMMUNITY COLLEGE STUDENTS

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DEDICATION

This work is dedicated to the glory of God. It is because of His mercy that I was not consumed. His compassion did not fail; it was new every morning. Great is God's faithfulness. God's faithfulness showed greatly through my husband Anthony L. Forman and our children: Mahdi, Anthony, Rabiah, Devin, Amani, Kesha, and Aneas. I love each of you and praise God for you.

Nasir and Nakai we are off to the zoo!

"It was the God in me!"

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CHAPTER 1

INTRODUCTION

Background of the Study

The more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth and achievement, their satisfaction with their educational experiences, their persistence in college, and the more likely they are to continue their learning.

-The Study Group on the Condition of Excellence in American Higher Education (1984)

The first colleges in America subscribed to the goal that youth be educated in good letters and manners. Regrettably, prior to the American Revolution, the colonial college touched few lives. Records estimate over one in every thousand colonists attended any of the colleges. By the post-Civil War period, however, institutions of higher education were studying and examining their purpose and goals. This resulted in the restructuring of American higher education, which was influenced by social, political, cultural, and economic factors. By the early twentieth century, American higher education had created an environment wherein research universities dominated the system and community colleges were focused on moving from an extension of the high school to the junior college. Throughout the twentieth century, all sectors of postsecondary education continued to grow: “By 1990 there were over 2,100 American public colleges or universities with 900 public community colleges and 1400 private colleges” (Lucas, 2006, p. 249).

Between 1975 and 2007, public 4-year colleges and universities had increased by 20%, from 537 to 643, and private 4-year colleges and universities increased from 1,329 to 1,986 or 49% (US Department of Education, 2008a). By the end of the twentieth century, community colleges enrolled approximately 40% of all college students and 42% of first-time full-time freshman (Dougherty, 2001). The growth of the community college resulted in an increase to 1,053 such institutions by 2008 (US Department of Education, 2008b). Currently, community college enrollment represents 46% of all undergraduate enrollments (AACC, 2008).

Although higher education in the United States has continued to grow, the mission, purpose, faculty roles, and student bodies differ between the two-year colleges and the universities (Lee, 2007). Universities tend to emphasize research as primary in their missions, placing teaching and community service in secondary and tertiary order of importance; in contrast, two-year colleges regard teaching as the highest priority. The purpose of 2-year colleges also differs from universities in that universities serve to provide bachelors level degrees and above, while two-year colleges serve to provide associates degrees, transferable junior college level credits, and workforce training, including technical programs. Research fills a large portion of the time of university faculty, whereas two-year college faculty members spend the majority of their time on teaching and learning. Therefore, while faculty teaching junior college credits at two-year colleges must have a master's degree in the subject they teach, a PhD is the credential required at most universities. However, two-year and four-year institutions are similar in providing post-secondary courses and in serving the communities in which they are situated (Lee, 2007).

Fortunately, millions of students attend community colleges each year hoping to improve their lives (AACC, 2008). Many of these students are disadvantaged and rely on the community college for access to higher education (Cohen & Brawer, 2003). As a result, lower income students, students of color, immigrant students, women, former welfare recipients, academically underprepared students, and first generation college students are disproportionately enrolled at the community college as compared to 4-year institutions (McCabe, 2003). Community college students are also older, more likely to enroll part-time, and face added burdens of working full-time and supporting dependents while enrolled in college (Matus-Grossman & Gooden, 2002; US Department of Education, 2003a).

Because of their convenient location, open access, and low cost, community colleges enroll students who are more deprived than other colleges and universities (Cohen & Brawer, 2003; AACC, 2007). In 2005, nearly 30% of community college students were African American or Hispanic (US Department of Education, 2006). Additionally, more traditional-age students have

enrolled in the community college, despite a higher enrollment of non-traditional students (Adelman, 2005a). Approximately one-fourth of community college students came from the lowest income group (US Department of Education, 2006).

There is agreement among researchers that education has one of the most positive influences on life (O'Banion, 1997; Cohen & Brawer, 2003; Baum & Payea, 2005; Upcraft, Gardner, & Barefoot, 2005; Pascarella & Terenzini, 2005; Levin, Belfield, Muennig, & Rouse, 2007). Studies revealed higher education influenced outcomes beyond educational attainment. For example, college-educated people obtained higher household incomes and greater economic resources (Baum & Payea, 2005; Olson, 2007; US Department of Commerce, 2008). In fact, Di Maggio (1982) and Hertz (2005) have suggested a correlation among parent's education, children's educational attainment, and adult socioeconomic status.

However, research has indicated differences between the academic success of community college students and their counterparts at universities (Cohen & Brawer, 2003). Specifically, the diversity of student goals, ages, and outside responsibilities of community college students differ radically from the goals, ages, and outside responsibilities of more traditional students (US Department of Education, 2007). Moreover, research supports that community college students succeeded, were retained, and persisted at lower rates (Pascarella & Terenzini, 1991; Tinto, 1993); attended college less than full-time, were more likely to work (Cohen & Brawer, 2003); were often older (AACC, 2006); commuted (Gonzalez, 2000); had greater family responsibilities (Cohen & Brawer, 2003); and had more family problems affecting their education process (Hagedorn, Maxwell, & Hampton, 2001). However, "Community colleges have played an important role with respect to providing access to groups of students who have not traditionally pursued higher education" (McLain, 2008, p. 1).

Student access should lead to student success; however, student success has been identified by various definitions. ACT (2008) defined success in college as fulfilling academic requirements and being accomplished when the student earns a degree by taking and passing courses. However, Braxton (2006) has reported that student success extended far beyond the

indicators of student retention and graduation. Additionally, Harackiewicz, Durrik, Linnenbrink-Garcia, & Tauer (2008) presented interest as a reason for student success. Students departing the postsecondary education system also impacts student success.

Recently, the focus on accountability in higher education has increased. The use of enrollment-driven formulas for funding has being replaced by performance indicators (Zarkesh & Beas, 2004). Twelve such performance indicators frequently used by the community college have been identified by the Center for College Policy (Education Commission of the States, 2000). The top six indicators from the study were job placement, transfer rates, graduation degrees, retention, licensure pass rates, and remediation activity. Although graduation rates remain a popular indicator, Stauss (2001) did not support this measure as a reflection of the success of a community college due to the volume of students who are not degree-seeking. However, the National Center for Public Policy and Higher Education (2003) highlighted the link between institutional funding with retention or degree completion, reporting that fiscal strategies are not the only means states can use to influence institutional behavior.

Specifically, this study was used to extract variables and find relationships that may predict the success of the community college student from The National Education Longitudinal Study of 1988 (NELS:88). NELS:88 is secondary dataset which consists of a 12 year period of data collection covered by the base-year completed in 1988 (BY) and four follow-up studies: F1 completed in 1990, F2 completed in 1992, F3 completed in 1994, and F4 completed in 2000. NELS:88 allowed the tracking of postsecondary enrollment patterns and the outcomes of students through 2000. The data collected from 2000 will be the primary dataset for this study.

Statement of the Problem

This study addressed the need for more research in the area of success profiles or predictors for students in the community college. The development of a successful community college student profile could address the concerns of McClenney and Greene (2005), Kuh, Kinzie, Schuh, & Whitt (2005), and Pascarella and Terenzini (2005). A profile could also identify the influence of age, gender, race or ethnicity, income, parents' education, and risk factors on

student success. For the purpose of this study, student success is defined as degree attainment at the 2-year public institution. The student characteristics captured in NELS:88 were not isolated to determine how they affect student success, therefore, it is not obvious whether these characteristics are factors for student success at the community college or if they significantly influence student success.

In previous studies, researchers acknowledged that much is known about first-generation college students with respect to their academic preparation, transition to postsecondary education, and progress toward degree attainment; however, little is known about their predictors of student success (Pascarella, Person, Wolnick, & Terenzini, 2004). Clearly, the future of the United States depends on how well the population is educated. National surveys of the adult population, however, indicate that large numbers of adults do not demonstrate the necessary skills to compete in the work environment (Kirsch, Braun, & Yamamoto, 2007). Additionally, substantial differences in average proficiencies among groups based on race or ethnicity and socioeconomic status, which influence social, educational, and economic opportunities, continue to increase (Kirsch, Braun, & Yamamoto, 2007)

Seventy-five percent of low-income students who start a community college degree or certificate program either drop out or fail to complete the program within five years (MDRC, 2008). Brock and LeBlanc (2005) also found that many students end their academic program before completion. Of course, the community college open-door policy attracts students from diverse backgrounds and experiences (Cohen & Brawer, 2003). The 2003-2004 profile of undergraduates reported 61% of the community college students were independent, 26% fell below the poverty level, 79% worked while enrolled, and fewer than 47% received some form of financial aid (US Department of Education, 2006). Findings from the same 2006 undergraduate profile report explained that community college students completed degree and certificate programs at low rates because students did not intend to complete degree programs. According to the Department of Education (2002b), there are seven characteristics known to adversely affect persistence and attainment: delayed enrollment, no high school diploma (including GED

recipients), part-time enrollment, financial independence, having dependents other than spouses, single-parent status, and working part-time while enrolled. This study labeled these characteristics as risk factors. Students attending the community college fit into almost all characteristics known to adversely affect persistence and attainment (US Department of Education, 2002b).

Studies have been completed on high school grade point average (GPA) as an indicator of student success (Adelman 1999a, 2006); on the effects of income and race or ethnicity on student success (ACT, 2008); and on student interest in a subject area as a reason for student success (Harackiewicz, Durrik, Linnenbrink-Garcia, & Tauer, 2008). However, these studies focused on the student without looking at the challenges to student success. On the other hand, Pascarella and Terenzini (2005) found that decisions based on evidence were instrumental in how a student developed and was influenced by the college. McClenney and Greene (2005) stated, “. . .too many students are being left behind,” and “. . .the open door too often becomes a revolving door” (p. 2).

Purpose of the Study

The purpose of this quantitative study was to find predictors of student success. Using a predictive correlational design, the intent of this study was to find the relationships between the dichotomous dependent variable with the categories, degree recipients and non-degree recipients, and the independent variables, student characteristics and risk factors. Specifically, this study was used to extract variables and find relationships that may predict the success of the community college student from the 12 year period of data collection covered by the base-year (BY) and four follow-up studies (F1, F2, F3,F4) of NELS:88. For the purpose of this study, student success is defined as degree attainment at the community college. The population included 1,137 students who earned the associate degree and 2,496 students who attended the 2-year public institution and did not receive an associate degree.

Kuh, Kinzie, Schuh, and Whitt (2005) found that “what students do during college counts” (p.8). Likewise, Pascarella and Terenzini (1991, 2005) dedicated two books to the study of how

college affects students. The fundamental questions of their studies are still relevant to student success. This study will build upon previous work on student success by examining the effects of personal characteristics and risk factors of community college students through the lens of Astin's (1993) conceptual framework for studying student outcomes: The Input-Environment-Outcome (I-E-O) model.

Conceptual Framework

Astin's Input-Environment-Outcome (I-E-O) model addresses the complexities of research in higher education by highlighting the interdependence between inputs, environments, and outputs: "Inputs refer to the characteristics of the student at the time of initial entry to the institution; environment refers to the various programs, policies, faculty, peers, and educational experiences to which the student is exposed; and outcomes refer to the student's characteristics after exposure to the environment" (Astin, 1993, p. 7). The role and influence of the community college becomes the environment where the exposure takes place and changes are identified and explained. Astin's (1993) original purpose for the model was to assess the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions. Furthermore, Astin (1993) emphasized that natural experiments allow the researcher to examine multiple effects simultaneously. The I-E-O model allowed this researcher to examine student success looking at characteristics and risk factors that influence students, the environment wherein the influence occurs, and what the influence produces.

Research using Astin's I-E-O Model

Snyder (2008) used Astin's I-E-O model to explore the academic success of low-income students. The quantitative study focused on a single institution in which budget cuts were significant. Snyder highlighted the importance of degree attainment across income groups and discussed the gap between low and high income students. Snyder supported the need to move beyond understanding barriers and benefits of degree attainment for low-income students.

Snyder's study found there is a gap in the literature relating to retaining low-income students and a need to examine the issues related to why studies have not examined this issue.

Lee (2007) used Astin's I-E-O model as the framework for a case study of four community college women who were the first in their family to attend college. The purpose of the study was to better understand persistence among community college women who were the first to attend college. Murray (2006) found Astin's I-E-O model to be the proper conceptual framework to investigate the predictive power of student attributes in a path analytic model for academic success in the first year of college. Murray's study had a dual purpose: first, to explore how student attributes shape student engagement and how the college environment shapes the student attributes, and second, to examine how student attributes and college environment contribute to academic success. Another study using Astin's I-E-O model was completed by Oseguera (2005), who published an article describing how institutional and environmental attributes contribute to or impede baccalaureate degree attainment.

Use of the I-E-O Model in the Study

For the purpose of this quantitative study, inputs were represented by student characteristics: age, gender, race or ethnicity, income, parental education, and the following risk factors: delayed enrollment, part-time enrollment, financial independence, dependents, single parent status, and working part-time while enrolled. The environment, which includes programs, support services, policies, procedures, and process, was identified as the community college, and the outcome was identified as student success, which was defined as degree attainment. The development of the student during the community college experience will be determined by comparing those who attained the associate degree with those who attended the 2-year public institution without completing the degree.

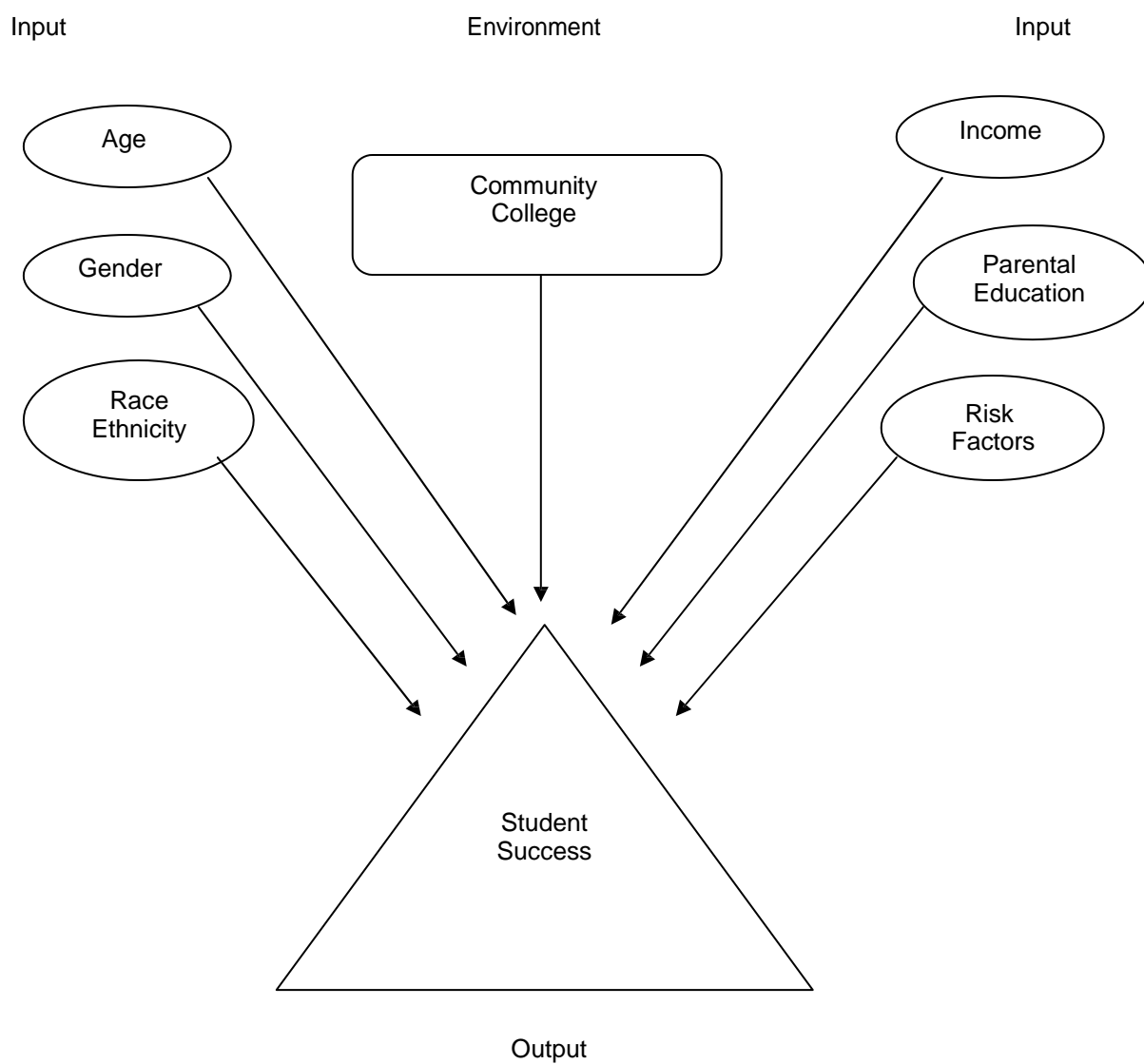


Figure 1. Conceptual Framework for the Relationship Between Input-Environment-Output

Research Questions

This research study focused on the relationship between student characteristics, risk factors, and community college student success by using the National Education Longitudinal Study of 1988 and the four follow-up questionnaires to answer the following research questions:

Central Research Question

1. What are the distinguishing characteristics of successful community college students?

Supporting Research Questions

1. Is there a correlation between a student's age and student success?
2. Is there a correlation between a student's gender and student success?
3. Is there a correlation between a student's race or ethnicity and student success?
4. Is there a correlation between a student's income and student success?
5. Is there a correlation between a student's parent's education and student success?
6. Is there a correlation between a student's risk factors and student success?

Hypotheses

Ho₁ There is no statistically significant correlation between age and student success.

Ha₁ There is a statistically significant correlation between age and student success.

Ho₂ There is no statistically significant correlation between gender and student success.

Ha₂ There is a statistically significant correlation between gender and student success.

Ho₃ There is no statistically significant correlation between race or ethnicity and student success.

Ha₃ There is a statistically significant correlation between race or ethnicity and student success.

Ho₄ There is no statistically significant correlation between income and student success.

Ha₄ There is a statistically significant correlation between income and student success.

Ho₅ There is no statistically significant correlation between the parent's education and student success.

Ha₅ There is a statistically significant correlation between the parent's education and student success.

Ho₆ There is no statistically significant correlation between risk factors and student success.

Ha₆ There is a statistically significant correlation between risk factors and student success.

Independent Variables

The six independent variables for this study were extracted from the National Education Longitudinal Study of 1988 student characteristics: age, gender, race or ethnicity, income, parents' education, and risk factors. The researcher recognized that some terms might need to be explained to add greater clarity to the study. For purposes of this study, risk factors represent six characteristics that have the potential to adversely affect student success. The risk factors include delayed enrollment, part-time enrollment, financial independence (poverty threshold), having dependents other than spouse, single-parent status, and working part-time while enrolled (US Department of Education, 2002b, p.151).

Additionally, the researcher included descriptive statistics on four additional variables which were seen in the literature as factors which have been included in studies relating to the community college (McCabe 2000; Raftery & VanWagoner; 2002; Cohen & Brawer, 2003; Matus-Grossman & Gooden, 2002; McClenney, 2004a). The researcher included data on a) remedial education, b) why the students enrolled at the community college versus a 4-year institution, c) whether work or study was the reason for employment, and d) why the student left the community college.

Dependent Variables

The dependent dichotomous variable for this research study is student success, which categorizes students who attained the degree and students who attended the 2-year public institution who did not complete the associate degree. A dichotomous variable has two categories (Virginia Tech, 1999). For the purpose of this study, student success is defined as degree attainment.

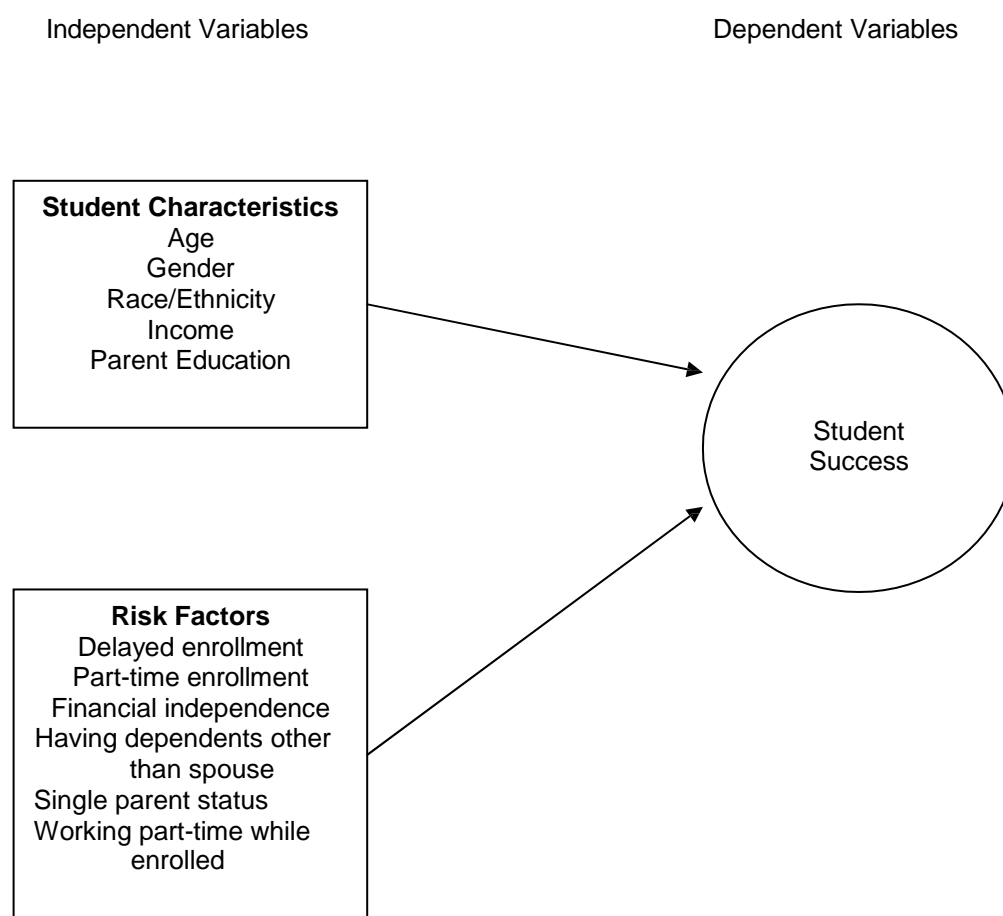


Figure 2. Independent and Dependent Variables

Significance of the Study

This study seeks to improve research, policy, and community college practices through examining the correlation between student characteristics, risk factors, and student success at the community college. Research on the connection between the distinguishing characteristics and community college student success will also provide information on ways to present appropriate support for the family, community, high school, and the community college. The research may also contribute to the literature by providing information to create a better understanding of the correlation between personal student characteristics, risk factors, and other factors that contribute to student success. For example, Astin (1993) emphasized the importance

of providing, “educators, students, and policy makers with a better basis for knowing how to achieve desired education outcomes” (p. 7). Understanding the characteristics and risk factors that influenced the student’s decisions may improve the environment for community college success. The findings from this study may be helpful to K-12, community colleges, education leaders, and others interested in promoting student success. Moreover, the findings may be used to develop a profile of successful community college student characteristics.

Assumptions

1. The National Education Longitudinal Study data represents students, parents, teachers, and administrators from public and private schools in the US.
2. The longitudinal study design will allow for correlations to be identified.

Limitations

1. Non-sampling errors are identified as coverage errors. This type of error is described by the US Department of Education (1996) as the failure to include the entire universe of interest in the sample population.
2. Secondary data sampling is structured and cannot be modified, although the sample was “freshened” during the first two follow-up studies.

Operational Definitions

2-year public institution: an institution that is regionally accredited to award the associate degree as its highest degree. It is also known as the community college (Cohen & Brawer, 2003; US Department of Education, 2002d).

Gender: male or female (US Department of Education, 2002b, p.142).

First Generation Students: neither parent had more than a high school education (US Department of Education, 2001a).

Income: the annual earnings from employment in 1999 and the poverty threshold. (US Department of Education, 2002d).

The National Education Longitudinal Study of 1988 (NELS:88): the study of a sample population which had been surveyed five times across 12 years. The first data collection was the

base-year 1988 survey, followed by the first follow-up study during 1990, the second follow-up study 2 years later in 1992, the third follow-up study in 1994, the fourth follow-up study in 2000 when most of the sample members were two through eight years removed from their high school graduation (US Department of Education 2002a).

Parent's Education: the highest level of education completed by the student's mother or father, whoever had the highest level (US Department of Education, 2002b, p.150).

Race or Ethnicity: categories identifies by the new federal standards for collecting race and ethnicity data: 1) Asian or Pacific Islander; 2) Hispanic or Latino (any race); 3) Black, non-Hispanic; 4) White, non-Hispanic; 5) American Indian or Alaska Native; and 6) More than one race (US Department of Education, 2002a p.236).

Risk Factors: represents an index of risk of 0-7 based on the 7 characteristics known to adversely affect persistence and attainment. Characteristics for this study include six of the factors: delayed enrollment, part-time enrollment, financial independence, having dependents other than spouse, single-parent status, and working part time while enrolled (US Department of Education, 2002b, p.151).

Student Success: degree attainment at the 2-year public institution, also known as the community college (ACT, 2008).

Summary

This chapter launched the discussion of student success in higher education in general and community colleges specifically. The background, problem, and purpose of the study framed the discussion on research that has studied influences on student success and the research that still needs to be completed. Astin's (1993) I-E-O model provided a lens for looking at community college student success. NELS:88 allowed the researcher to have easy access to a large national data set. Chapter 2 provides a review of relevant literature and studies influencing student success.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter provides a discussion of the literature relevant to the topic under investigation. Figure 3 illustrates the literature review pyramid. The chapter begins with a historical overview of the community college to establish the study's context. The overview includes institutional characteristics, mission and demographics, and challenges. The remainder of the chapter is organized into four study concentrations. Part one of the literature review highlights studies on community college access, which contains a discussion of student characteristics emphasizing student demographics; outcomes; remedial/developmental education; retention, attrition and persistence; enrollment goals and expectations; cost and financial awareness; and risk factors relevant to the study. Part one features the work of Adelman (2005, 2006, 2007), McCabe (2000), Cohen and Brawer (2003), and Bailey and Associates (2005), Truman (1947), Boylan (2002), and Tinto (1993). Part two provides an in-depth discussion of studies on student success literature relevant to the study featuring work from Bailey and Associates (2003, 2005), Spady (1970), Tinto (1987, 2001), Braxton and Associates (1998, 2007), Pascarella and Terenzini (2005), Astin (1977, 1985, 1993), Upcraft and Associates (1989), Schlossberg (1981, 1995, 2006), and Kuh and Associates (2005). Part three presents major studies in which the conversation focused on student characteristics and student success with research from Kuh and Associates (2001, 2003, 2005), CCSSE (2006, 2007), Chickering and Associates (1969, 1987, 1993), O'Banion (1997), Milliron and Associates (2000), Marti (2006), McCabe (2000, 2003), Adelman (2006), and Harackiewicz and Associates (2000, 2002, 2008). Part four covers studies on student success strategies with research from Barr and Tagg (1995), O'Banion (1997), McPhail (2005), Harvey-Smith (2005), Milliron and Associates (2000, 2005), McClenney (2004), Tinto (1987), Gabelnick & Associates (1990), and Rose and Cook (2006). Lastly, part five includes literature pertaining to the NELS:88 data set and the variables identified for this research study.

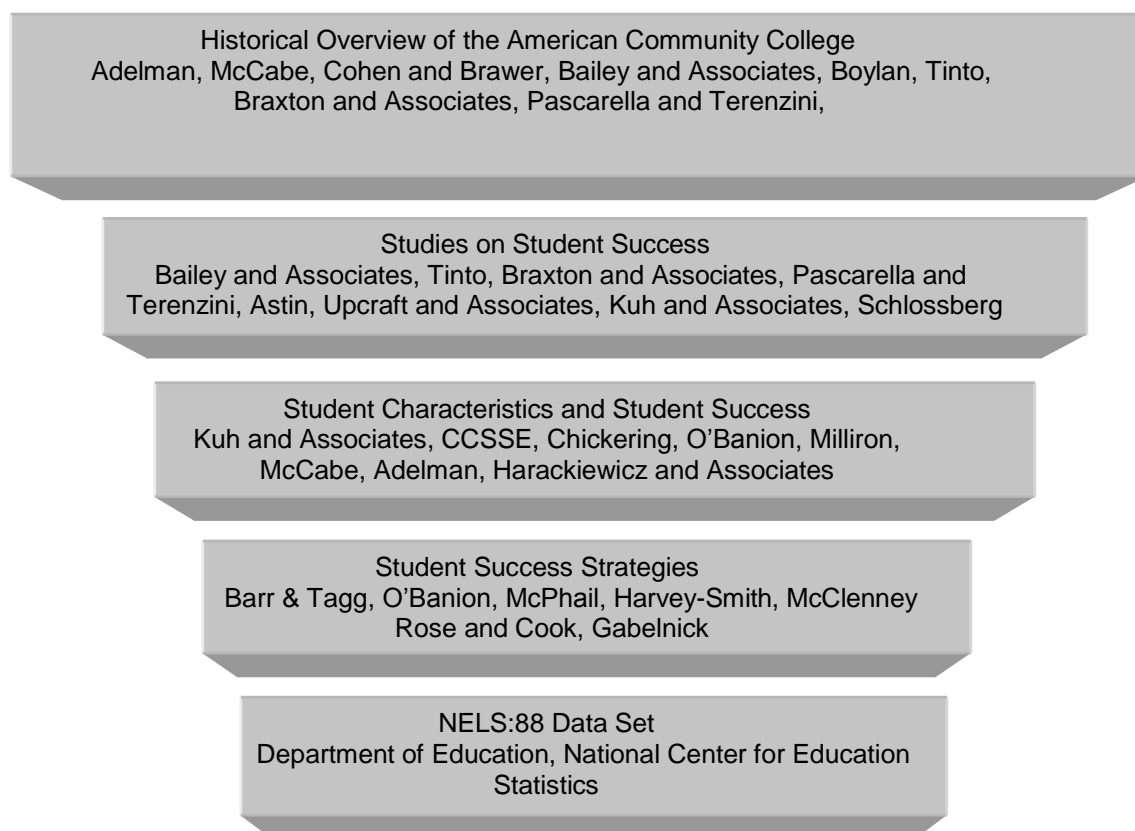


Figure 3. Literature Review Pyramid

Historical Overview of the American Community College

The community college began in the early 1900s as an extension of the high school (Deegan & Tillery, 1985). By 1947, public education was extended through the first two years of college for all youth who were able to profit from such education by the *Higher Education for Democracy: The Report of the President's Commission on Higher Education*, also known as the Truman Commission Report (Truman, 1947). Since its inception, the community college has responded to the educational needs of adult learners. Originally focused on its transfer function, community colleges began to expand their mission to include vocational education, continuing education, remedial education, workforce development, customized training, and community service (Cohen & Brawer, 2003). Furthermore, community colleges have served as gateways for nontraditional students and immigrants using the resources of the community college to prepare for employment (Deegan & Tillery 1985; Smith & Vellani, 1999; Cohen & Brawer, 2003).

The community college experienced growth during the 20th century. This growth was attributed to general population expansion, older student participation, financial aid, part-time attendance, underprepared students, women, and minorities (Cohen & Brawer, 2003). During 1940 to 1970, the largest group of beneficiaries of financial aid was the veteran, with the economically disadvantaged and minority students close behind (Cohen & Brawer. 2003). At the conclusion of the 20th century, community colleges enrolled approximately 40% of all college students and 42% of first-time fulltime freshman (Dougherty, 2001; US Department of Education, 2003b). With the increase in students came a change in mission and demographics (McPhail, 2005).

Institutional Characteristics

Institutional characteristics found to affect the success of community college students are not measured easily. Research conducted by Bailey et al. (2005a) from the Community College Research Center identified community college characteristics that impact student outcomes. The first institutional characteristic identified was institutional size. The study found that smaller community colleges provided a personalized environment that supported clearer outcomes

(Bailey et al., p. ii). Other characteristics included lower minority graduation rates and instructional and student service expenditures (Bailey et al., pp. ii, iii). Their study suggested that cuts in instructional expenditures and student services lowered college performance and reduced retention. Overall, the individual student characteristics were found to be a better determinant of graduation and retention than the institutional characteristics (Bailey et al., p. iv).

Community College Mission and Demographics

The community college's mission is to "provide quality education and the necessary support to help all students attain their educational goal" (CCSSE, 2006a p. 3). The American Association of Community Colleges (AACC) described the community college as the center of educational opportunity that welcomes all who desire to learn, regardless of wealth, heritage, or previous academic experience (AACC, 2007). AACC (2008) reported there are over 11.5 million students enrolled in 1,195 colleges, which equates to 46% of all undergraduates. The average age of these students was 29, with 60% female, 40% male, and 35% minorities. The community college tuition was less than half of the public 4-year college or university tuition, and 47% of students attending the community college received financial aid. Additionally, community colleges educated 59% of new nurses and 80% of firefighters, law enforcement officers, and emergency medical technicians.

Brint and Karabel (1989) described the early view of the community college as "an institution designed to divert students, rather than a place of preparing for transfer" (p. 38). Deegan and Tillery (1985) described four generations of the community college that ushered in a variety of missions. Generation one supported the mission of access and community services (p. 8); generation two defined the mission of terminal education, transfer and career orientation and guidance, lower division preparation for university transfer, adult education, and removal of matriculation deficiencies (p. 9); generation three introduced a community college separated from the public school and a new emphasis on technical education; the fourth generation introduced the comprehensive community college with a bend toward noncredit programs and community service (p. 17). Finally, the fifth generation of the community college is described by Dougherty

(2001) as “beset by controversy over its impact, origins and future” (p. 5). Other researchers have also identified the fifth generation as entrepreneurial (Esters, 2007; Watson, 2005).

The community college is uniquely American, is accessible to all and regardless of a student's ability, and allows a student to further his or her education, sharpen skills, or change careers (Cohen & Brawer, 2003). Because of an open admission policy, the community college provides students with an opportunity to experience higher education they might not otherwise encounter. Additionally, students attend the community college and often receive remediation of skills they have not mastered. Currently, the community college educates more academically underprepared students than any other type of postsecondary institution (Brint & Karabel, 1989; Cohen & Brawer, 2003; Tinto, 2007). To understand the mission of the community college is easy, but to comprehend the challenges in the mission is more difficult (Community College Survey of Student Engagement [CCSSE], 2006a).

The community college provides educational opportunities to students in urban, suburban, and rural locations throughout the United States. Because of open admissions policies and low costs relative to many 4-year colleges and universities, the community college is accessible to millions of adults who may lack the preparation or the financial resources to pursue higher education (Brock & LeBlanc, 2005). Despite the accessibility and affordability of the community college, Brock and LeBlanc (2005) found many students end an academic program before completion. The results of their study suggested some students who left the community college before completing a degree or transferring to another college or university never intended to do more than take a few classes.

Community College Challenges

As the mission of the community college changed, increased challenges surfaced. Six leading authorities on the community college identified major challenges facing the community college (Levine, Templin, McPhail, Roueche, Shannon, Omundson, 2004). Levine (2004), former president of Columbia University's Teacher College, identified competing agendas as a challenge: “the nation's two year colleges will face a tidal wave of increased enrollment demand

at a time of limited, perhaps even shrinking, resources” (p.2). Templin (2004), current President of Northern Virginia Community College, identified capacity as a challenge: community colleges are losing their capacity to meet the critical needs of a changing society (p. 3). McPhail (2004), former Director and Professor in the Morgan State University Community College Leadership Doctoral Program, stated, “The community college has changed, expanded, and stretched its resources to capacity. It is time to determine which missions are most suitable for each community we serve” (p. 4).

Roueche (2004), Director and Professor at University of Texas at Austin, stated, “The largest challenge facing community colleges over the next five years will be the drastic increase in the number of students seeking admission to open door institutions, coupled with the continued decline in financial support for all of higher education” (p. 5). Shannon (2004), former Chancellor of St. Louis Community College and former chairman of AACC Board, identified hiring, training, and retaining personnel as a challenge: “Our student body is the most diverse in higher education, stretching capacities in student services and learning labs, not to mention faculty members’ ability to deal with a multitude of learning styles and levels of student preparedness” (p. 6). Lastly, Omundson (2004), Professor of Humanities at Lansing Community College, stated, “the biggest challenge community colleges face is fragmentation in our programs and isolation and divisiveness among both faculty and administrators” (p. 6), noting that “Fragmented curricula are delivered to students as if they were fragmented persons” (p. 7).

Students attending the community college also face challenges that include full-time and part-time employment, lack of financial support, and lack of academic preparation. Students have to address these challenges while completing their education, as McClenney (2004a) stated:

Community colleges have inarguably the toughest job in American higher education. They serve disproportionately high numbers of poor students and students of color. Many of their students are the ones who were least well served by their previous public school education and therefore most likely to have academic challenges as well as fiscal ones.

Community college students are three to four times more likely than students in four-year colleges to reflect factors that put them at risk of not completing their education. (p. 11)

Dowd (2007) also draws attention to the challenges facing community colleges as they seek to balance their roles as both gateways and gatekeepers with multiple missions (p. 407). Dowd (2007) stated, "It is becoming clear that community colleges have both a democratization effect and a diversion effect, but that these effects are experienced inequitably by students of different backgrounds" (p. 415).

She explains gateways as "open-access colleges with minimal enrollment requirements and low tuition" (p. 407) and gateways to higher education as "access to groups that have been traditionally underrepresented in and underserved by four-year colleges and universities" (p. 408). Brint and Karabel (1989) used the term diverted dream when referring to the educational opportunities available at the community college. They also discussed democratic ideology versus diversions. The community college has offered postsecondary education opportunities to anyone who desired the chance to further their education. The US Department of Education (2002c) found the following:

The 'traditional' student is not typical. Three quarters of all postsecondary students in 1999-2000 had at least one nontraditional characteristic. The most highly nontraditional students (those with four or more nontraditional characteristics) were concentrated in public 2-year institutions, with two-thirds enrolled in this type of institution.

Two-thirds of highly nontraditional students perceived their primary role to be that of an employee, which suggested that school did not have first claim on their time and energy. Among highly nontraditional students who considered themselves primarily a student, many found that work limited their classes and scheduling options. (p. 19)

Other challenges for community college students that were identified over a ten-year period of time have been described as engagement practices (McClenney, 2004 a & b), college student development (Chickering & Reisser, 1993), student involvement (Astin, 1993), student attrition, and retention (Tinto, 2001). McClenney (2004 a & b) posited a need for developing

learning-centered colleges based on the finding that the more actively engaged students were with faculty, other students, and their subject matter, the more likely they were to learn and persist. Chickering and Reisser (1993) called for student development based on creating mature interpersonal relationships, establishing identity, and developing purpose and integrity. Astin (1993) created a theory based on the need for student involvement. In his theory, student involvement is contingent upon the quality and quantity of energy invested in the college experience. Yet eight years later, Tinto (2001) challenged institutions to look at the educational setting in addition to the situations students face as a solution to retaining successful students.

Community College Access

Access and the Community College

As Bailey, Leinbach, and Jenkins (2005b) have reported, community colleges are expected to provide open access, and in many states, students seeking to enroll included those who had not graduated from high school (p. 4). Community college students tend to take longer to complete a program, come from lower-income families, use financial aid to replace lost wages, arrive with weaker academic skills in need of remediation, are more likely to work while enrolled, attend part time, and interrupt their studies (Matus-Grossman & Gooden, 2002; Tovar & Simons, 2006; US Department of Education 2002b). Each of these factors negatively impact retention and graduation rates (Adelman, 2006; Crosta, Calcagno, Bailey, & Jenkins, 2006). If graduation rates were the only gauge that dictated student success, the community college would have a difficult time being more selective in the admission process Bailey et al. (2005b). Although student characteristics must be taken into account when evaluating student success, community colleges should not be criticized for enrolling the students they serve Bailey et al. (2005b).

Student Demographics

For the purpose of this study, student characteristics include age, gender, race/ethnicity, income, and parents' education. Research has been done to identify individual student characteristics such as academic preparedness, household income, parents' level of education, gender, race/ethnicity, and patterns of enrollment (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach,

2005a). Complicating the community college students' education is juggling work and family issues (Bailey et al., 2005a; Tovar & Simon, 2006). Research by Bailey et al. (2005a) and Tovar and Simon (2006) identified social issues that complicated matters that are beyond the community colleges' control. This is compounded by the growing number of minority students attending the community college and by the lack of academic preparation and financial resources (Tovar & Simon, 2006).

Access Issues in Community Colleges

Adelman (2007) asked the question, "Do we really have a college access problem?" (p. 1). He provided an overview on access by providing four definitions currently operational. He began with the definition of threshold access or walking through the door. This version of access encompassed "the first time you walked through the door of any accredited postsecondary institution and stayed long enough to generate a transcript record, you crossed the basic threshold for access" (p. 2). He identified the next version of access as recurrent access: "If you started a degree program, left without completing, and returned to any kind of postsecondary education for any purpose at any time in life, you had access" (p. 2). Convenient access was the third definition: "whether you first walked through the door or returned, if you did so at a season and location of your preference, you had access" (p. 2). Lastly, he defined distributional access to his way: "if you entered, for the first time, the postsecondary institution you wanted to attend or the type of institution that somebody said you were qualified for and should attend, you had access" (p. 2).

Once Adelman (2007) completed his overview of the four definitions for access, it was apparent that he was most concerned about threshold access. He identified this criterion as not specific to any particular type of college; whether the student is enrolled in three or 23 credits; how long the student stayed at the institution; whether the student's high school GPA was 2.0 or 4.0; if the student graduated from high school; or whether the student is age 18 or 38 with two jobs, two kids, two cars, and two mortgages (p. 2). Adelman (2007) argued that we don't have an

access problem, but a participation problem because “Access is meaningless without that effort” (p. 6).

College Access and Outcomes

Open access to education has been advocated by policy statements regarding the role of the community college in the Truman Commission Report (1947) and in the Carnegie Commission on Higher Education (1974). The bold statements on access featured in these documents support the community college's open door policies. The Truman Commission urged the establishment of the community college, expansion of adult education programs, and the distribution of Federal aid to education in a manner allowing the poorer states to bring their educational systems closer to the quality of the wealthier states (Truman, 1947).

On the other hand, the Carnegie Commission distinguished between providing higher education for everyone and ensuring access to higher education for everyone (Carnegie Commission, 1974). The Carnegie Commission focused on access for minority and low-income students, stating that a state system should “provide universal access to its total system, but not necessarily to each of its institutions, since they vary greatly in nature and purpose” (p. 18). The Carnegie Commission also identified the community college as the institution of choice within a state's overall higher education system for providing access.

Remedial Education and Developmental Education

For the purpose of this study, the terms remedial and developmental education will be used interchangeably. Fortunately, as McCabe (2000) has reported, thirty years of research have provided significant contributions to guiding individuals who work with underprepared students. After all, the quality of the open-access college is dependent on remedial education and on increasing the skills of the underprepared student to succeed in a college course (McCabe, 2000). McCabe (2000) made the point that a well educated citizen and workforce is important. Furthermore, he argued that the community college educates the most deficient students and prepares them for employment and personal advancement (McCabe, 2000). It is important to

remember that students in remedial courses and students in college-level courses may share the same goals to obtain a degree (Leinbach & Jenkins, 2008).

Boylan (2002) defined developmental education as “courses or services provided for the purpose of helping underprepared college students attain their academic goals” (p. 3). He continued the discussion by defining the underprepared students as “any students who need to develop their cognitive or affective abilities in order to succeed in a postsecondary educational experience” (p. 3). These definitions cover the substantial number of new students entering most colleges underprepared for college level work in at least one of the basic subject areas of math, reading, and writing (Zeidenberg, 2008). He discussed several reasons why remedial courses were controversial:

1. Students don't like them because they feel that having earned a high school degree, they are ready for college work.
2. They take time and money and postpone the earning of college credits and the attainment of degrees and certificates.
3. Placement into remedial courses may result in some students leaving college earlier than they otherwise would have.
4. The public complains that they are paying for students to retake subjects they should have mastered in high school.
5. College faculty and administrators, blaming deficiencies in the K-12 system, are often frustrated by the difficulties of serving an unprepared student population. (p. 55)

Although Zeidenberg (2008) found controversy in remedial education, Raftery and VanWagoner (2002) had a different perspective on preparing students for college-level work. They argued that remedial education has become an important community college mission. Raftery and VanWagoner (2002) acknowledged the importance of developmental education, even though it is not always effective. As McCabe (2000) reported in his study, 43% of community college remedial education students successfully completed their program.

Retention, Attrition, and Persistence

Providing equal access to education is one of the missions of the community college (Cohen & Brawer, 2003). Unfortunately, keeping students in college is a challenge that all colleges face, especially the community college. The terms persistence and retention are often used interchangeably in the literature and have been used interchangeably in this study. According to the National Center for Education Statistics (NCES), retention refers to the institutional measure, and persistence refers to a student measure (US Department of Education, 2003b). Attrition is another term commonly used in retention and is defined as the reduction in numbers of students resulting from lowered student retention (US Department of Education, 2003b). For clarity, institutions retain, and students persist. Frequently cited, Tinto's (1993) Interactionist Theory suggested the more frequently students engage with faculty, staff, and their peers, the more likely they will persist and graduate. Therefore, student integration is important in the prediction of student retention. Student attrition can also be linked to the students' intention and commitment when they enroll in college (Tinto, 1993).

Student Enrollment Goals and Academic Expectations

Bailey et al. (2005b) explored the impact of students' reasons for enrollment and educational expectations on their outcomes. Their study provided a voice for the community college presidents who responded to an article criticizing low graduation rates. In the article, the presidents debated the definition of success. They raised the concern that students attend the community college for a myriad of reasons. Therefore, success should be defined based on meeting personal goals instead of graduation rates. Bailey et al. (2005b) reported that students have diverse goals and expectations for enrollment, which may not include a degree or transfer. According to Adelman (2005b), there are students who attend college to sample the experience. He further explained this level of experimentation or sampling is made possible by the low cost and close proximity to the students' home.

Various surveys have been completed to assess why students enroll in the community college. Answers provided by Beginning Postsecondary Student Survey 1996-2001(BPS:96/01)

emerged from questions designed to assess student enrollment intentions as students started and moved through college (US Department of Education, 2003b). Respondents were given outcome options related to various goals: obtain job skills, obtain a degree or certificate, transfer, or personal enrichment. The responses confirmed that there is a relationship between the primary reason for enrolling and student outcomes.

In addition to the primary reason for enrolling in college, BPS:96/01 asked students about their expectations regarding degree completion. Students' aspirations and opinions about expectations and achievement resulted from this question, and they identified student ambition. Additionally, students' long-term educational expectations are also correlated with their educational attainment (Adelman, 2005a). Specifically, students with modest goals tended to pursue less education, to persist less, and to earn fewer degrees.

Bailey et al. (2005b) made numerous observations and reports about community college students. Their research supported that students arrive at college with motivation for enrolling and expectations, which influences their success. Some of the expectations and motives for enrolling in the community college were shared in six areas:

1. When community college educators suggest that students' expectations be taken into account when examining student outcomes and college success, they were assuming that expectations were stable and fixed characteristics of the student (Bailey et al., 2005b).
2. Additionally, education professionals are not considering that student goals and expectations are the products of social processes, which interact with the factors that determine college outcomes (Bailey et al.).
3. Student expectations are likely to change over the course of the college experience. Changing expectations foster the need for colleges to influence students' expectations through counseling, career planning, and relevant pedagogy, which cultivates confidence and increased goals (Bailey et al.).
4. Some goals and motivations are socially constructed (Bailey et al.).

5. Educators must remember that personal characteristics influence students who enter postsecondary education through community colleges (Alfonso, Bailey, & Scott, 2005).
6. Personal characteristics represent systematic difficulties faced by lower-income and minority students. Educators should be concerned with why students have lower expectations (Bailey et al.).

Cost of Postsecondary Education and Financial Awareness

Gladieux and Swail (2000) stated, "There are no guarantees in life, with or without a college diploma" (p. 688). In many ways, the United States is doing better and worse in the area of higher education (Reindl, 2007). As a result, the number of students attending college has increased as the cost of providing higher education and the prices paid by the student have increased considerably. Although public two-year institutions have done a better job of limiting price increases, their tuition and fees have risen 22% in the past decade (Reindl, 2007).

While community college tuition is generally lower, students still juggled work and college attendance, which can be a greater burden than paying tuition (Burdman, 2005, Matus-Grossman & Gooden, 2002). However, community colleges are less likely to promote student loans (Regus, 2008). Community college educators also believed keeping students debt levels at a minimum provided a service to students who tend to be underprepared and at a higher risk for dropping out (Burdman, 2005). However, available research suggested the aversion to loans may reduce opportunities for low-income and minority students to access financial assistance to attend college.

Student Success in the Community College

Overview of Retention Models and Theories

There are several models and theories on student attrition that build, merge, interconnect and foster student retention. Spady (1970) was the first to propose a widely recognized model for college student dropouts that focused on the process of student integration and highlighted the family background. He proposed five variables, including academic potential, normative

congruence, grade performance, intellectual development, and friendship support. Spady's model drew from Durkheim's (1951) suicide model, which observed that suicide was more likely to occur when individuals lacked a sense of belonging to a larger community.

Expanding on Spady's work, Tinto (1987) theorized that departure from college resulted from the student and college's inability to facilitate the student's sense of belonging or establishing membership within the college community. This model incorporated Van Gennep's (1960) rites of passage, which marked an individual's movement from youth to adulthood. Tinto (1987) characterized the action as movement from one community toward another to present the view that student departure involved a lack of integration or belonging, which happened over a period of time for various reasons or throughout the college career. Tinto (1987) also recognized that different groups of students had different circumstances requiring customized policy and programming, depending on the group or type of institution.

Tinto (1987) posited that important changes occur as students matriculate. He reported that these changes were attributed to the positive or negative interactions within the academic and social communities of the college. If positive, the interaction facilitated a sense of belonging and fostered further integration. If negative, students began to view their needs, interests, and values as significantly different from the college and as too high of a commitment. He concluded the negative experiences might also be compounded by limited interpersonal skills, work, or family obligation, which lead to early departure.

Tinto (2001) captured students' conditions for retention within the context of expectation, advice, support, involvement, and learning. Tinto (2001) provided an answer to what it would mean for an institution to take retention seriously:

Among other things, institutions would stop tinkering at the margins of institutional life and enhancing student retention, the linchpin about which they organize their activities. They would move beyond the provision of add-on services and establish those educational conditions that promote the retention of all, not some, students. To be serious about student retention, institutions would recognize that the roots of attrition lie not only in their

students and the situations they face, but also in the character of the educational setting.

(p. 1)

Student Involvement Theory

One of the most cited theorists on student involvement is Astin (1977, 1985, 1993). Astin (1993) proposed a conceptual framework referred to as the Input-Environment-Output (I-E-O) model. The outputs were categorized in three groups: inputs, which are characteristics of the student at the time of initial entry to the institution; the environment, which includes programs, policies, faculty, peers, and educational experiences to which the student is exposed; and outcomes when student characteristics are exposed to the environment. Astin (1985) reported students learn by becoming involved. Astin (1993) defined student involvement as both the quality and quantity of energy that the student invests in the college experience.

Transition Theory

Transition theory is defined as “a structure for viewing any change, whether it is anticipated or unanticipated, positive or negative, a success or a failure, or an event or a non-event” (Goodman, Schlossberg, & Anderson, 2006, p. 275). Schlossberg, Waters and Goodman (1995) recommended that the individual begin by defining the type of transition as anticipated, unanticipated, or a non-event. To further understand the transition, it was recommended that the individual identify and understand his or her relationship to the event or nonevent. Her recommendations continued with the individual assessing the impact of the transition and how it altered daily life.

Transition theory is described as “a model for analyzing human adaptation to transition” (Schlossberg, 1981, p. 2). Transition theory was created because of a need for a framework that would facilitate an understanding of adults in transition and lead them to the help they needed in order to cope with the “ordinary and extraordinary process of living” (Schlossberg, 1984. p. vii): “A transition, broadly, is any event, or non-event that results in changed relationships, routines, assumptions, and roles” (Schlossberg et al., 1995, p. 27). However, her research showed that individuals differ in their ability to adapt to change (Schlossberg, 1981, p. 2). Schlossberg (1989)

therefore emphasized it was important to understand the meaning a transition has for a particular individual.

Retention Practices

ACT (2006) reported that approximately 52% of students enrolled in community colleges departed between the first and second year. Despite the research on student departure, the rates of attrition continued to persist. Braxton, Brier, and Steele (2007) translated the research and compiled seven recommendations for policy and practice as made by the authors of empirical studies on college student retention or college student departure. Their recommendations were supported by other researchers, which are identified in the compilation of studies reviewed by Braxton et al. (2007):

1. Individuals who advise or teach should be concerned about the career development of the students they serve. Bean (1982) recommended that academic advisors share the value of the students' choice and how it affects post-graduation employment. Furthermore, advisors' recommendations should connect with discussion of the relevance of courses for future employment.
2. Staff and faculty should demonstrate respect for students as individuals by being appropriately sensitive to their needs and concerns. Berger and Braxton (1998) stated that social rules and policies must be communicated to students, enforced by the administration, and developed with participation of the students, always considering diverse needs.
3. Staff and faculty should develop and foster a culture of enforced student success. This culture would treat all students as if they were at risk (Braxton, Brier, & Steele, 2007). In addition, orientation should extend beyond a one-time event (Pascarella & Terenzini, 2005; Nippert, 2000). Nippert also suggested that faculty should be involved in the orientation program to foster early contact with students.
4. Faculty members should also be involved in programs and activities designed to reduce student departure. An example of faculty and student interaction outside of

the class would include problem solving (Nippert, 2000). Research also found that faculty teaching methods and student involvement in research fostered relationship and retention (Braxton et al., 2007).

5. Institutional integrity should be demonstrated by assuring the congruence of institutional actions with the goals and values espoused by the institution. It is important that administrators identify what constitutes support. Childcare, finances, learning communities, and courses focusing on diversity are examples of support (Braxton et al., 2007).
6. The development of student affinity groups and student friendships should be fostered. Faculty and staff should encourage the creation of student affinity groups who share a similarity in values, beliefs, and goals (Braxton et al., 2007).
7. As appropriate, retention interventions described in the literature should be selected and implemented. These include instructional approaches and support services created to combat departure (Braxton et al., 2007).

The recommendations suggested can be implemented at the community college and can support the involvement theory (Astin, 1993), learning college principles (O'Banion, 1997), and learning community models (Laufgraben, 2005).

Faculty, Staff and Academic Factors

Recognizing what students know as well as their perspectives when making decisions fostered student engagement in learning (Kinzie, 2005). If faculty and administrators used good practice to create curriculum and other portions of the college experience, students would put forth more effort (Kuh, Kinzie, Schuh, & Whitt, 2005). Kuh et al. (2005) suggested that students would experience greater gains in the areas of critical thinking, problem solving, effective communication, and responsible citizenship by writing more, reading more, meeting more frequently with faculty and peers, and using information technology appropriately. Kinzie (2005) offered nine suggestions that encouraged faculty to promote and achieve student success:

1. Embrace students in their learning, recognizing that students can learn under the right conditions. Using a variety of active and collaborative approaches fosters success.
2. Set and maintain high expectations for student performance; achieving standards of achievement should be consistent with student's academic preparation. These standards should stretch students to go beyond what they think they can accomplish. Students become motivated to accomplish high standards.
3. Clarify what students need in order to succeed by informing them of expectations. Providing examples of what successful students do enables them to perform better. Sharing academic and support resources encourages academic success. Making student support staff aware of students experiencing difficulty allows for timely interventions to be implemented.
4. Use engaging pedagogical approaches congruent with course objectives, students' abilities, and learning styles, create an environment in which students learn more when they are involved in their education, and provide opportunities to apply it in different settings.
5. Build on students' knowledge, abilities, and talents by valuing students' prior knowledge and experiences, providing a connection to the curriculum that makes the experience meaningful for the student.
6. Provide meaningful feedback to students through self assessment and feedback from faculty and peers, maximizing their learning. Peer evaluation enhances students' sense of responsibility, and self-assessment encourages reflection.
7. Weave diversity into the curriculum and emphasize how students benefit from learning more about themselves and other cultures.
8. Make time for students. Although focusing on student learning is labor intensive, there must be value placed on student-faculty interaction outside the classroom.

9. Hold students accountable: “there are no shortcuts to excellence.” Programs must require student commitment and accountability. (pp.2-3)

Upcraft and Gardner (1989) identified conditions that coincided with Kuh et al. (2005) in their research on student success. These researchers agreed that faculty and staff should set high expectations for student success regardless of gender, ethnicity, or level of student ability; provide academic and social support groups through developmental education courses, tutoring, supplemental instruction, counseling, and mentoring; and offer early and frequent feedback about student performance in order to strengthen student persistence. Furthermore, social and academic involvement created an environment where students were more likely to persist. They concluded the more students learn, the more they value learning and the need to persist.

College Transition Programs

Credit based transition programs were believed to facilitate access and success in college (Bailey & Karp, 2003). These programs provided students an opportunity to earn college credits for coursework completed during high school. Programs included in the transition programs are dual enrollment or dual credit; Advanced Placement (AP); International Baccalaureate (IB); Tech Prep; and Middle College High Schools (Bailey & Karp, 2003, p. 2). Most transition programs serviced high-achieving students, but there were some individuals who wondered if these types of programs could serve the less prepared student.

Transition programs' positive influence on student success led some educators to believe early college exposure to lower achieving students improved their access to college (Bailey & Karp, 2003). The greatest appeal to these educators was based on the knowledge that some college is going to be necessary for the current and future workforce. Bailey and Karp found in the engagement of the disengaged high school student a method to encourage student preparedness and success.

Additional programs that have transitioned students from high school into college as well as during the college experience are the Federal TRIO Programs (TRIO). The Federal TRIO Programs are educational opportunity outreach programs designed to motivate and support

students from disadvantaged backgrounds. They are contained in six programs that were established during the progressive history of TRIO. Upward Bound, the oldest program, provides fundamental support to participants in their preparation for college entrance. The second outreach program, Talent Search, was designed to increase the number of youths from disadvantaged backgrounds who complete high school and enroll in postsecondary education institutions of their choice. Student Support Services was created as the third educational opportunity program, with the mission to increase the college retention and graduation rates of its participants and to help students make the transition from one level of higher education to the next (US Department of Education, 2008c).

Some TRIO programs targeted students beyond the traditional college transition age. The fourth program, the Educational Opportunity Centers, were created to fulfill the goal of increasing the number of adult participants who enroll in postsecondary education institutions. The fifth and six programs were the Training Program for Federal TRIO Programs and the Ronald E. McNair Postbaccalaureate Achievement Program. The McNair program prepares participants for doctoral studies, and the Training Program provides funding to improve the skills and expertise of the directors and staff in the TRIO programs. (US Department of Education, 2008c)

Studies on Access, Engagement, Learning College Principles,

Involvement and Student Success

Student Engagement

Student engagement is broadly defined as the extent to which students are actively involved in meaningful educational experiences and activities (Marti, 2006): “What students do during college counts more for what they learn and whether they will persist in college than who they are or even where they go to college” (Kuh et al., 2005, p. 8). While the literature supported the relationship between action and outcome, Kuh et al. identified two essential components of student engagement. One component was “the amount of time and effort students put into their studies and other activities that lead to the experiences and outcomes that constitute student success” (p. 9). Another component was “the ways the institution allocates resources and

organizes learning opportunities and services to induce students to participate in and benefit from such activities” (p. 9). Likewise, others linked student engagement to involvement in purposeful activities inside and outside the classroom (Astin, 1984; Kuh & Hu, 2001; Kuh 2003; Pascarella & Terenzini, 2005; Flowers, 2004).

Community College Student Engagement

Student engagement has been associated with community college student success and has therefore increased as a favored strategy (CCSSE, 2006d). The Community College Survey of Student Engagement (CCSSE) was developed to capture the experiences and activities of students in the community college. CCSSE supports a culture of evidence, which is reflected when colleges collect, analyze, and share data related to persistence, learning, and attainment. The 2006 findings included participation and responses from 447 community colleges from 46 states (CCSSE, 2006a). The CCSSE instrument, the Community College Student Report (CCSR), provided data that can be used as a tool for improving teaching and learning by assessing the level at which students engage in good educational practices (Marti, 2006).

Additionally, the 2002 Special Analysis on Nontraditional Undergraduates reported that 46% of students at the community college left after their first year. However, students with family and work responsibilities were not found to take more breaks in their enrollment than traditional students. The percentage that left but later returned was 26% for nontraditional students and 28% for traditional students (US Department of Education, 2002c).

Historical perspective on student engagement

The literature identified several student engagement frameworks and theories that provided a historical perspective. Chickering and Gamson (1987) reported on the commitment and action of students and faculty. They offered seven principles based on research of good teaching and learning. Good practices in undergraduate education included encouraging contacts between students and faculty, developing reciprocity and cooperation among students, using active learning techniques, and giving prompt feedback. Additional suggested principles consisted of emphasizing time on task, communicating high expectations, and respecting diverse

talents and ways of learning. These practices were developed as guides for faculty, staff, and students, with support from trustees and community stakeholders.

Furthermore, Chickering and Gamson (1987) suggested integrating the seven principles in practices, providing more opportunity for multiplying their effects, potentially resulting in six powerful forces in education: activity, expectations, cooperation, interaction, diversity, and responsibility. These principles addressed the “how,” and Chickering and Gamson (1987) believed an undergraduate education should prepare students to understand and deal intelligently with modern life. Chickering and Reisser’s (1993) vectors of development provided an understanding of how students develop and are based on the original model of Chickering.

Chickering’s (1969) seven vectors of college student development are still referenced in the literature. A theory originally written to address the developmental needs of traditionally-aged college students of the 1960s can be equally useful to students of all ages today. Chickering and Reisser’s (1993) movement through autonomy required both emotional and instrumental independence and later, recognition and acceptance of interdependence. The development vectors included developing competence, managing emotions, moving through autonomy toward independence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity (Chickering & Reisser, 1993). These vectors are not mastered in a specific order, but represent a growth process, ultimately developing congruence between one’s behavior and the personalized values that are held (Chickering & Reisser, 1993). Additionally, respect for another’s point of view is promoted, and socially responsible behavior is desired throughout the movement.

Student Engagement Practices at the Community College

Activities to enhance student engagement are not only found with services to students. Staff and faculty are also offered five ways of doing so, further allowing community colleges to understand institutional performance and reach for excellence in student engagement (CCSSE, 2006a). Criteria identified by the CCSSE instrument in gauging community college performance included the ability to do the following:

1. Compare their performance to the national average and use it for comparative reasons;
2. Compare their performance to high performing colleges and examine the practices contributing to their success;
3. Measure their overall performance against results for their least engaged group and set aspirations for increased levels;
4. Gauge their work in areas their college strongly values;
5. Compare where they are now to where they want to be. (p. 9)

Ultimately, the use of the data should be the beginning of understanding and used to support the community college work of learning, persistence, and success (CCSSE, 2006a, p.10). For maximum effectiveness, programs not producing desired outcomes must be modified or discontinued (CCSSE, 2006a).

Community College Engagement Benchmarks

CCSSE results are associated with benchmarks. These national benchmarks represent effective educational practices. The five CCSSE benchmarks of effective educational practice in community colleges have been identified as active and collaborative learning, student effort, academic challenge, student-faculty interaction, and support for learners (CCSSE, 2007). Each of these benchmarks was supported by various researchers and practices.

First, students learned more when they were actively involved in their education and had opportunities to think about and apply what they learned in different settings (CCSSE, 2006b). This interaction facilitated collaboration, which allowed students to learn how to solve problems or master challenging content. Additionally, developing these valuable skills prepared students to deal with situations and problems encountered in the workplace, community, or in their personal lives (CCSSE, 2006b). Using active learning techniques and challenging intellectual and creative work was central to student learning and collegiate quality (CCSSE, 2006b). Each skill encouraged the use of structured exercises, challenging discussions, team projects, and peer

critiques, which are also supported by learning college principles and the brain's natural learning process (O'Banion, 1997; Smilkstein, 2003).

In addition, students' behavior contributed significantly to their learning and to the likelihood that they attained their educational goals (CCSSE, 2006c). Time on task was a key variable, and there were a variety of settings and means through which students applied themselves to the learning process (CCSSE, 2006c). Emphasizing time on task may be demonstrated through mastery learning, contract learning, and computer assisted instruction (Milliron & Miles, 2000). Each of these types of learning is based on students having appropriate time and resources.

Furthermore, the more interaction students had with their instructors, the more likely they were to learn effectively and persist toward achievement of their educational goals (CCSSE, 2006d). Personal interaction with faculty members strengthened students' connections to the college and helped them focus on their academic progress (CCSSE, 2006d). Working with an instructor on a project or serving with faculty members on a college committee let students see firsthand how experts identified and solved practical problems. Through these interactions, faculty members became role models, mentors, and guides for continuous, lifelong learning (CCSSE, 2006d). Upcraft et al. (2005) encouraged contact between students and faculty by developing freshman seminars, which were expanded to include the freshman year experience.

Finally, students performed bettered and were more satisfied at colleges committed to their success and to cultivating positive working and social relationships among different groups on campus (CCSSE, 2006e). Some of these relationships were based on prompt feedback and communication. The use of prompt feedback may occur with assessment, but assessment without feedback does not contribute to learning (CCSSE, 2006d). Learning outcomes assessment practices also supported this principle by providing expectations before the student engaged in activity (Middle States Commission on Higher Education, 2007; Linck, Mince, & Ebersole, 2005). Additionally, early college programs created seamless transitions from high school to college and provided a glimpse into the college experience (McCabe, 2000, 2003).

Each of these principles respects the students' diverse talents and ways of learning by implementing personalized instruction and supporting students working at their own pace through diverse teaching styles, diverse advising models, and effective programming (McCabe 2003; Smilkstein, 2003; Pardee 2004).

Student Success in Community Colleges

ACT (2008) defined success in college as fulfilling academic requirements and is accomplished when the student earns a degree by taking and passing courses. Broader definitions of success have emerged over time to include interest (Dweck & Leggett, 1988; Harackiewicz et al., 2000), motivation (Nicholls, 1979), and performance and mastery (Midgley et al., 1998). Furthermore, ACT posited that prior academic achievement and cognitive ability surpassed all other factors in their influence on student performance and persistence in college. In the same study, ACT reported that differences in college success across racial/ethnic and income groups narrowed when students had the requisite academic achievement and relevant non-academic skills. The ACT study concluded that there were no shortcuts to academic success.

The National Postsecondary Education Cooperative commissioned five papers to answer questions about student success. Braxton (2006) reported that student success extended far beyond the indicators of student retention and graduation. He identified eight domains for college student success: academic attainment, acquisition of general education, development of academic competence, development of cognitive skills and intellectual dispositions, occupational attainment, preparation for adulthood and citizenship, personal accomplishments, and personal development (p. 2). These domains differentiated student success beyond student retention and graduation and provided multiple ways for college students to demonstrate success.

Interest as a Reason for Student Success

Harackiewicz, Durrik, Linnenbrink-Garcia, and Tauer (2008) presented interest as a reason for student success. They highlighted the importance of interest in an education as an important outcome variable and as a motivational factor that may influence learning and

performance. Dweck and Leggett (1988) reported that student achievement goals have the ability to shape academic motivation and interest because they reflect the purpose of achievement behavior and can influence how a student approaches coursework. An earlier study by Harackiewicz et al., (2002) supported a reciprocal effect of goals and interest. The 2002 study identified the importance of considering the level of interest in place before students formulate their goals for a course.

There is also a chance that there will be a continued development of interest, predisposing the student to adopt mastery goals (Harackiewicz et al., 2008). Harackiewicz et al. continued their discussion by noting that there must be consideration of the experiences and interests students bring to class. Some students have interest because they had prior experience, while other students had limited knowledge and little interest in a subject but developed or discovered an interest during the course (Harackiewicz et al.). These two types of interest have been discussed in the literature and are identified as individual interest and situational interest.

Individual interest has been defined by Renninger (2000) as a dispositional quality and is deep and enduring. Renninger argued that individual interest required having substantial knowledge of a topic as well as valuing that knowledge (p. 4). Renninger further explained that students who enter a course with a high level of initial interest in the topic might be described as having an individual interest (p. 4). Situational interest is another type of interest, which occurs in response to the environment (Dewey, 1913; Hidi, 1990).

Situational interest is further explained by Harackiewicz et al. (2000) and Hidi and Renninger (2006) through the example of a trigger which stimulated the student's attention, eventually holding their interest. This trigger may occur in the classroom, developing meaning and value, which may be maintained over time (Harackiewicz et al., 2000). Hidi and Renninger (2006) posited that interest maintained beyond a situation may become an individual interest. Therefore, it is also important to distinguish two types of situational interest: "caught" interest, which is associated with arousal, attention, and affect and "held" interest, which is associated with personal value and meaning (Harackiewicz et al., p. 5).

Predictors of College Going Behavior

Academic preparation has been identified as one of the most significant predictors of college success (Martinez & Klopott, 2005; Adelman, 2006). Other predictors identified in multiple research projects include social support, access to information, parental involvement and knowledge about college, and financial aid (Martinez & Klopott, 2005; Adelman, 2006). Adelman (1999a) reported that students completing academically challenging and intense coursework in high school were more likely to complete college. His study maintained that this high quality of coursework is comparable to the academic experiences colleges expected for students to have prior to beginning college. Adelman's (2006) *Toolbox Revisited* confirmed that curriculum has a stronger correlation to college completion. In accord with Adelman's report, college-going behavior has been predicted by grade point average, class rank, and test scores (McDonough, 1997).

Student Success Strategies

The Learning College

Traditionally, higher education supported the concept that the quality of education was determined by academic instruction. In the new paradigm, learning is the focal point (Barr & Tagg, 1995). In this new paradigm, students bear a portion of the responsibility for their own learning. The foundation of learning centeredness is defined by O'Banion (1997), who turned the college's focus toward student learning. O'Banion's learning college is based on the assumption that the educational experience was designed for the convenience of the learner and based on six key principles:

1. The learning college creates substantive change in individual learners.
2. The learning college engages learners as full partners in the learning process, with learners assuming primary responsibility for their own choices.
3. The learning college creates and offers as many options for learning as possible.
4. The learning college assists learners to form and participate in collaborative learning activities.

5. The learning college defines the roles of learning facilitators by the needs of the learner.
6. The learning college and its learning facilitators succeed only when improved and expanded learning can be documented for its learners. (p. 47)

McClenney (2004a) in a report on the future of the community college posited that the community college will have to assume a collective responsibility for student learning. However, collective responsibility is not something most faculty members have instituted in their classrooms. McClenney further stated that, traditionally, the classroom has been an isolated and individualistic venture. However, the Learning College Project sponsored by the League for Innovation in the Community College revealed that collective responsibility involved cutting across classrooms, disciplines, departments, and divisions to develop learning-centered colleges (McClenney, 2004a). McClenney (2004b) with support from the CCSSE questionnaire maintained that the more actively engaged students were with faculty, other students, and subject matter, the more likely they were to learn and persist.

O'Banion's (1997) book, *A Learning College for the 21st Century*, challenged educators to consider two fundamental functions. Everyone interested in higher education was asked to put learning first in every policy, procedure, and practice and to overhaul the conceptual, procedural, curricular, and other architecture of postsecondary education. O'Banion emphasized the learning college was tailor made for the community college and holds great promise for helping students make passionate connections to learning.

O'Banion's learning college introduced new research on old learning. Pedagogy, which is the science and art of education, was stretched to encompass how learners learn (O'Banion, 1997). O'Banion also identified how learners learn encompassed more than the classroom. Studies on the role of organizational change, student development, and technology had a presence in the learning college literature.

Organizational Change

McPhail (2005) posited, “becoming a learning centered college means changing the culture of the organization” (p. 211). She continued the discussion by stating, “The shift from teaching to learning brings about not only changes in curricula, but also modifications in the delivery of programs and services and the allocation and reallocation of funds” (p. 212). Lastly, she emphasized that colleges must act upon the learning college principles.

“In the learning college, the differences between services and instruction are blurring, with profound implications for the separation between academic and student affairs” (Clements, Harvey-Smith & James, 2005, p. 95). The learning college transition creates an environment in which student affairs professionals assume greater leadership in institutional change (Clements et al., 2005). This new role includes learning outcomes and documentation of improved and expanded learning. Clements et al. (2005) stated, “outcomes can be measured through student retention and success rates, out of class involvement with resources such as student activities, tutoring, assessment of orientation experiences, advising, counseling, and [can] deliberately create a campus climate with increased instructor-student interactions” (p. 93). This view of student services supports the role of developing the whole student. Student development and student affairs practices also offer other factors that contributed to student success Clements et al. (2005).

Student Development

Harvey-Smith (2005) explained the evolving role of student affairs in the learning organization: “Two of the most enduring concepts in student affairs tradition are commitment to the development of the whole person and enhancement of the academic mission” (p. 90). She also identified the student affairs division as a full partner in the learning organization and no longer as a supplemental partner. To fulfill the role of enhanced learning for all students, student affairs professionals will have to be multifaceted, requiring “significant shifts in attitudes, orientation, and responsibilities” (p. 92).

Purnell and Blank (2004) provided a service approach to student development. In order to help students overcome academic disadvantages, community colleges have implemented an array of student support services. These services took on many forms and addressed a variety of student needs. Purnell and Blank found that student services offered by community colleges were encompassed in one of five categories: academic guidance and counseling, academic support, personal guidance and counseling, career counseling, and supplemental services (p. 7).

Technology used by the students, staff, and faculty also impacted student success.

Technology

Integrating instructional technology in the classroom to meet the needs of today's community college student is an issue for faculty (Rose & Cook, 2006). Technology has been identified as a way to continually provide more personalized experiences for students (Rose & Cook, 2006). Unfortunately, Rose and Cook found that in spite of advances in technology, the classroom experience for students has not changed. They suggest there has to be a change in pedagogical methods in order to transform the learning experience.

On the other hand, Shank (2005) reported that the course design and teaching quality determined the effectiveness of instruction. He suggested that in these environment students and instructors can meet, share information, ask questions, and get help through hybrid formats and web conferencing. Such methods have been established for online learning and have been useful for face-to-face instruction. However, Shank (2005) identified common concerns about teaching and online courses. The five major concerns identified were: online courses are not as effective as courses taught face to face; all courses cannot be taught online; students will not connect with the instructor; the technology is too difficult to learn; and teaching online takes more time and effort than teaching face to face (Shank, 2005).

Opposing Shank's concern, Milliron and Prentice (2005) identified the use of technology in the learning college as a method that "eases the pressure" on instructors (p. 112). This supported O'Banion's argument that "the learning college places learning first and provides educational experiences for student anyway, anyplace, anytime" (O'Banion, 1997, p. 70). More

importantly, “technology is a time and place free medium” and “frees learning from the time and place constrictions” (O’Banion, 1997, p. 71). Another point identified by Milliron and Miles (2000) supported training students to have a vast understanding of technology while enhancing their keen sense of information.

Technology encouraged contact between students and faculty through the use of asynchronous communication (Milliron & Miles, 2000). The use of email, web conferencing, instant messaging, and the internet increased conversation and the exchange of work and ideas more frequently and expeditiously than before. The use of active learning techniques was facilitated by technology that allowed statistical and online research, computer-based music and design, and simulating learning environments—all available in real time and time delayed (Milliron & Prentice, 2005). Giving prompt feedback has a new meaning with technology. Webcams, digital recorders, and software editing features provided many options to the student and instructor. Students and faculty can respond immediately utilizing current information.

Technology emphasized time on task by documenting student participation and interaction in supplemental instruction tools like Blackboard and in resources such as online library access to references, journal articles, and methods for instant responses (Chickering & Ehrmann, 1996; Milliron & Prentice, 2005). High expectations can be communicated with technology efficiently and effectively, allowing students to sharpen their cognitive skills of analysis, synthesis, application, and evaluation (Chickering & Ehrmann, 1996). Finally, technology supported diverse talents and ways of learning. Students were able to use visuals, text and sound, and encourage self reflection and self evaluation.

However, as technology has bolstered the learning environment, there is still a gap between individuals who benefit from information technology and those who do not, which is referred to as the digital divide (Hawkins & Oblinger, 2006). The term digital divide also refers to the part of the population that is alienated by usability and empowerment. Nielsen (2006) identified the economic divide as the least relevant issue, the usability divide as being impacted by lower literacy skills and by the lack of website adherence to the guidelines governing writing

for low literacy users, and the empowerment divide, which affects the level of technology usage based on limited mastery of computer skills (p. 1). Identifying methods to address the digital divide will also impact academic success.

First Year Experience

Programs designed to foster integration into college increased the likelihood of student success during the enrollment period (Noble, Flynn, Lee, & Hilton, 2007). To increase retention, freshman or first year experience programs have been created and implemented. These programs are designed to assist first year students' as they transition from high school to college. In order for students to feel that they are related to the learning process, they must feel involved in that process (Braxton et al., 2007). Upcraft et al. (2005) identified principles of good practice for the first college year. They based their principles on the educational values that placed student learning as their highest priority. Many of the practices identified by Upcraft et al. were based on the framework or foundation of commitment, focus, partnership, balance, standards, dignity, and respect and responsibility.

Some of the principles for good practice involved institutional commitment to the leadership, faculty, staff, and governing boards as the foundation for student success; focusing on student learning inside and outside the classroom; partnerships between student affairs and academic affairs; a balance between challenge and support for achieving academic goals; establishing and communicating high expectations; and creating an atmosphere in which everyone is treated with dignity and respect (Upcraft et al., 2005). There has been a concerted effort to improve the first year experience for students, but educators must move beyond best practices and develop a research-based, comprehensive model of the first year of college that fosters student success and assessment of their achievements (Upcraft et al.).

Learning Communities

Learning communities encourage academic success by restructuring and linking curriculum that enrolls a common cohort of students (Price, 2005). This intentional restructuring of students' time, credit, and learning experiences supports a more explicit connection among

students, faculty, and disciplines (Gabelnick, MacGregor, Matthews, & Smith, 1990). The learning college benefits for students have been identified by several researchers. Grubb (1999) highlighted that communities are created among students participating in learning communities. Hesse and Mason (2005) shared that there are benefits of interaction between the students and their instructor. The Washington Center for Improving the Quality for Undergraduate Education (2003) reported, “students involved in learning communities become more intellectually mature and responsible for their own learning and develop the capacity to care about the learning of their peers” (The Washington Center, 2003, p. 4).

The learning community concept found its early roots in the work of Dewey (1933) and Meiklejohn (1932). Meiklejohn called for a community of study and a unity and coherence of curriculum across disciplines, and Dewey advocated learning that was active, student centered, and that incorporated shared inquiry. The contemporary views on the learning communities are based on the student retention framework developed by Tinto (1987). The four most common models of learning communities identified by Shapiro and Levine (1999) are paired or clustered courses, cohorts in large courses, team-taught programs, and residence-based programs. The impact of learning communities leads to change in the student and the institution (Laufgraben, 2005). Formal and informal interaction also impacted student success.

Early Alert

A synthesis of literature on best practices identified early alert programs as a positive influence on student completion rates (Bourdon & Carducci, 2002). Cuseo (2002) identified early alert programs as a system used to influence student retention and success. He introduced the intervention as a system that would allow students to receive formal feedback on their academic progress periodically and allow the student to seek corrective measures before the end of the course. During a review completed by Bourdon and Carducci (2002), the literature supported the use of early alert programs. Bourdon and Carducci found that the students involved in this intervention were able to do the following:

1. Be more likely to successfully complete the course in which they were having academic difficulty.
2. Maintain higher rates of continuous enrollment by the end of the academic year.
3. Have higher persistence rates for two or more consecutive semesters.
4. Exhibit higher persistence rates four years later (including transfer students). (p. 18)

Although the early alert programs differ between institutions, they represent another strategy to support student success.

Achieving the Dream

Achieving the Dream is a multiyear national initiative to help more community college students succeed: "Achieving the Dream was created to help more community college students succeed"...."the initiative is built on the belief that broad institutional change informed by student achievement data is critical to achieve this result" (Achieving the Dream, 2007, p. 1). Achieving the Dream focuses colleges and others on understanding and making better use of data to improve student outcomes (Achieving the Dream, 2006, p. 1). The use of this data is intended to improve student achievements. Colleges participating in Achieving the Dream have agreed to use data in some of the following areas: to drive strategies; monitor progress and evaluate outcomes; involve faculty, students, staff, and communities in their efforts; and advocate for state and national policy changes as needed (Achieving the Dream, 2007). The unique feature of the program is that all participants are committed to understand and use achievement data to improve their students' outcomes.

The National Education Longitudinal Study of 1988 Data Set

The National Education Longitudinal Study of 1988 represents an integrated system of data that tracked students from middle school through secondary and postsecondary education, labor market experiences, marriage, and family formation (US Department of Education, 2002a, p. 5). The Base Year to Fourth Follow-up Data File User's Manual described the base year study for NELS: 88 (BY) as a clustered, stratified national probability sample of public and private schools with eighth grade enrollment. The students responded to questionnaires and cognitive

tests; the school principals completed a questionnaire about the school; two teachers of each student were asked questions about the student, themselves, and the school; and one parent answered questions concerning family characteristics and student activities. The subject matter for the student questionnaire was school experiences, activities, attitudes, plans, selected background characteristics, and language proficiency. (US Department of Education, 2002a)

A unique feature of NELS:88 was the virtual self-weighting process. Schools were oversampled in certain special strata to ensure that policy-relevant subgroups would be adequately represented in the sample. Participation included 815 public and 237 private schools. There was a greater representation of small private schools, which impacted the within-school strategy of oversampling Hispanics and Asian or Pacific Islanders. Excluded from the NELS:88 sample were US Department of Interior supported Bureau of Indian Affairs schools, special education schools for persons with severe disabilities, area vocational schools that did not enroll students directly, and US Department of Defense dependents schools. In general, the student population excluded students with severe mental disabilities, students whose command of the English language would impact responses, and students with physical or emotional disabilities that presented difficulties with survey participation. (US Department of Education, 2002a)

The overview of each phase of the study is presented as documented in the Base Year to Fourth Follow-up Data File Users Manual (US Department of Education, 2002a). The NELS:88 first follow-up in 1990 (F1) occurred when most sample members were high school sophomores, included the same components of the base year study, with the exception of the parent survey. This follow-up introduced a “freshened” sample, which allowed for a representative sample of the nation’s sophomores. In addition, the dropout population could be tracked. Students, principals, and teachers all participated in the study. NELS:88 second follow-up in 1992 (F2) was conducted when most sample members were high school seniors. The previous freshening of the longitudinal sample allowed for trend comparisons with other National Center for Education Statistics (NCES) longitudinal studies. There were selected subsamples, which included data

collection from parents, teachers, school administrators, and academic transcripts. (US Department of Education, 2002a)

The NELS:88 third follow-up in 1994 (F3) occurred when most of the sample members had completed high school and after many had begun postsecondary education or entered the workforce. The study expanded to cover issues of employment and postsecondary access and was designed to allow continuing trend comparisons with other NCES longitudinal studies. This round of the study also introduced computer assisted telephone interviews and personal interviews, with respondents requiring intensive tracking and nonresponsive refusal conversion. (US Department of Education, 2002a)

The NELS:88 fourth follow-up in 2000 (F4) was conducted 12 years after the base year study and six years after the third follow-up (Appendix A). Most of the sample participants were out of high school eight years and were 26 years old. Samples of the population were enrolled in college, had completed college, or had completed graduate school. Others were married, had children, were divorced, and were experiencing a successful employment experience and less memorable employment experiences. The fourth follow-up also collected transcripts from the postsecondary institutions of the participants. (US Department of Education, 2002a)

NELS:88 will allow for the examination of a more current cohort of students; almost 25,000 students from across the nation participated in the base year study from 1,052 schools. The last follow-up in 2000 included interviews with 12,144 of the three NELS:88 sample cohorts 12 years after the base year data collection. NELS:88 provided longitudinal information on more recent community college students.

The base year through second follow-up student questionnaire was 60 minutes and was self-administered. The topics included student background, language use, home environment, perception of self, occupational or postsecondary educational plans, jobs and household chores, school experiences and activities. Two important baselines were established during this process: the transition from elementary or middle school to high school and the transition to postsecondary education or entry into the workforce. (US Department of Education, 2002a, p. 20)

Students also completed a series of achievement tests for each round of the study. The questions covered four subject areas, with a total of 116 items to be completed in 85 minutes. The subject areas were reading comprehension with 21 questions; mathematics with 40 questions; science with 25 questions; and social studies with 30 questions (US Department of Education, 2002a, p. 21).

The dropout questionnaire collected data to facilitate comparisons with the first and second follow-up questionnaire and the High School & Beyond (HS&B) drop out questionnaire. The data pertained to the following areas:

1. The last school attended by the sample member and the school's climate;
2. Reasons for leaving school and the actions that school personnel, parents, and friends took when the respondent stopped going to school;
3. The sample member's likelihood of returning to and graduating from high school; and
4. The sample member's current activities, employment history, and future plans.

(US Department of Education, 2002a, p. 25)

The content area for the third follow-up student survey included family structure, high school and postsecondary academic achievement, employment experience, work-related training, environment, and location. The fourth follow-up student interview consisted of 10 subjects: current activities, employment, job-related training, high school completion, postsecondary education, adult education, family formation, income and expenses, other outcomes, and race-ethnicity/residence (US Department of Education, 2002a, p. 28).

The purpose of the school administrator questionnaire was to gather general descriptive information about the educational setting and the environment associated with the individual student participants. However, the administrator sample did not constitute a national probability sample of schools and should be used as contextual data for student level analysis. The topics covered included general school characteristics; general student characteristics; teaching staff

characteristics; school policies and programs; and school governance and climate (US Department of Education, 2002a, p.30).

The teacher questionnaire was also a tool to gather information that could be used to analyze the behavior and outcomes of the student sample. The questionnaire was critical to investigating the learning environment. The design of the teacher questionnaire did present gaps in the coverage of some learning periods. Participants completed a 45 minute self-administered questionnaire in four content areas: the teacher's assessment of the student's school-related behavior, academic performance, and educational and career plans and goals; information about the class the teacher taught; information about the school's social climate and organizational culture; and the teacher's background and activities (US Department of Education, 2002a, p. 31).

Finally, the parent questionnaire focused on family background, socioeconomic characteristics, and the character of the home educational support system. Additional information collected related to parental behavior, education, occupation, financial aid decisions, income, and religious affiliation (US Department of Education, 2002a, p. 32).

Another component of the study was the transcript. During the second follow-up, researchers collected high school transcripts to facilitate the validation of high school course taking, grades and attendance, and to investigate course-taking patterns. The fourth follow-up transcript data collection was completed for the postsecondary education transcript. This component added to the richness of academic data collected in previous rounds of the study. The data from the postsecondary transcript included institutional characteristics, degrees obtained, and course-taking behavior (US Department of Education, 2002a, p. 33).

The major features of NELS:88 include the integration of data from students, dropouts, parents, teachers, and schools. The core design was supplemented to gather data on areas including high school and postsecondary transcript studies—and a high school effectiveness study. The study was intended to support a general purpose dataset for the development and examination of federal educational policy. Another intent was to inform decision makers, educational practitioners, and parents about the changes in the education system and how it

affects students' lives. One of the significant features of NELS:88 is the voice it provided for the role of parents (US Department of Education, 2002a, p. 10).

Variables from the National Education Longitudinal Study of 1988

Age

Cohen and Brawer (2003) determined the enrollment figures in community colleges are affected by the number of high school graduates. This is an introduction to the report that people age twenty-four or younger comprised only half of the student head count and 70% of the course load. Thirty percent of the "2004 seniors" who graduated from high school and immediately enrolled in college after graduation enrolled in the community college (US Department of Education, 2008d, p. 14). AACC (2008) reported that the average age of a community college student is 29, with 43% of the students 21 or younger and 42% of the students 22-39 years old.

Gender

AACC (2008) reported that 60% of community college students are female and that 40% are male. The "2004 seniors" reported no measurable difference between genders for enrollment in the community college immediately after high school graduation (US Department of Education, 2008d, p. 14). In academic year 2002-2003, women earned 60% of the associate degrees conferred (US Department of Education, 2005b). Cohen and Brawer (2003) identified 1978 as the year when women attending college in the US exceeded the number of men.

Race or Ethnicity

Identification with academics is defined by Osborne (1997) as "the extent to which one's self-evaluation in a particular area affects one's overall self-evaluation" (p. 728). He later posited, "Students who are more identified with academics should be more motivated to succeed because their self-esteem is directly linked to academic performance" (p. 728). To operationalize his theory, students with academic success would feel rewarded, and students experiencing poor performance would feel punished. Comparatively, when a student did not identify with academics, there was no motivation to succeed.

Farley (2002) reported that there is a disproportionate failure to retain and graduate students of color, which has an impact on life opportunities. He believes this educational failure contributes to racial, ethnic, and economic inequality. He further explained, "As our society becomes more diverse, success in a global economy depends more and more on our ability to fully educate a diverse population" (p. 2). However, he found minority students often feel marginalized, isolated, stressed, and defensive because they are perceived as spokespersons for their racial group.

Cohen and Brawer (2003) found that the minority student population represented in the community college is more reflective of the institution's location than of the ethnic population reflected at the university. Additionally, the community college provides greater access to the minority student. AACC (2008) reported that 35% of community college students are minorities, with the Hispanics representing 15%, African Americans representing 13%, Asian/Pacific Islanders representing 6%, and Native Americans representing 1%.

Income and Socioeconomic Status

Cook and King (2004) and McSwain and Davis (2007) found that more low-income adults are women and single parents. In addition, Cook and King found that low-income adults were more likely to have a GED, need remediation, less likely to be enrolled full-time, more likely to apply for aid, and possess characteristics that categorize them at higher risk for academic difficulty. Another study conducted by Sirin (2005) found that the socioeconomic status of the family impacted the student's academic achievement significantly. Moreover, the influence of the socioeconomic status "reflects the effect of resources at home but also may reflect the effect of social capital on academic achievement" (Sirin, 2005, p. 438). Cook and King (2004) stress the importance of providing low-income adults with educational opportunities beyond high school. Unfortunately, the risk factors identified in studies prohibit many low-income adults from improving their situation through postsecondary education.

Parents' Education and First-Generation Students

Barriers have been identified that are more likely to impact college students who are the first in their families to attend college compared to students who have at least one parent who has graduated from college (Pascarella et al., 2004). About 28% of the NELS:88 Third Year Follow-up (F3) 12th graders were first-generation students (US Department of Education, 2005a). They represented 22% of the students who entered postsecondary education between 1992 and 2000, showing that first-generation students were less likely than other students to attend college within eight years after high school. Additionally, a pattern was identified with this population of students. Forty-three percent of the first-generation students who entered postsecondary education between 1992 and 2000 left without a degree by 2000, while 24% graduated with a degree (US Department of Education, 2005a, p. iii). The opposite pattern was observed for students whose parents were college graduates: 68 percent completed a degree, and 20 percent left without a degree. Research also showed first-generation college students were more likely to enroll at the community college, commute to campus, take classes part-time while working full-time, and need remedial coursework (US Department of Education, 2005a). Furthermore, first-generation students differed from non-first-generation students in age and family background. The US Department of Education (2001b) found that first-generation students were older compared to students whose parents had some college experience or a degree and that more first-generation students were from the lowest family income quartile compared to students whose parents had some college experience.

Additionally, research indicates that first-generation college students have discrepancies in their level of academic preparation. Pascarella, Pierson, Wolnick, & Terenzini (2004) found that first-generation students completed fewer credit hours and worked more hours per week than their peers whose parents had attended college. With the combination of a lesser credit load, greater work hours, and the controls in their study, which included precollege cognitive development, secondary school grades and academic motivation, first-generation students had lower grades than their peers with parents who had both graduated from college (Pascarella et

al., 2004, p. 265). Lastly, the need for remedial courses prolonged the time to degree, which has been associated with poorer success and lower graduation rates (US Department of Education, 2005a).

Student Risk Factors

Risk factors identified in NELS:88 data are characteristics known to adversely affect persistence and attainment. The characteristics included delayed enrollment, no high school diploma (including GED recipients), part-time enrollment, financial independence, having dependents other than a spouse, single-parent status, and working part-time while enrolled (US Department of Education, 2002a, p. 151). Responses to these risk factors vary. Cohen and Brawer (2003), stated the following:

Community colleges are indeed untraditional, but they are truly American at their best, they represent the United States at its best. Never satisfied with resting on what has been done before, they try new approaches to old problems. They maintain open channels for individuals, enhancing the social mobility that has characterized America, and they accept that society can be better, just as individuals can better their lot within it. (p. 36)

Risk factors have the ability to be a distraction or motivate students.

Summary

This chapter provided a review of literature relevant to studies influencing student success. The literature review included a historical overview of the community college and additional sections on studies discussing student access, student success, and student success strategies. Chapter III will discuss the research methodology used to conduct this study.

CHAPTER 3

METHODOLOGY

Introduction

This chapter provides an overview of the research methodology. It includes sections on research design and rationale, population, instrumentation, data collection, and data analysis from NELS:88.

Research Design and Rationale

A predictive correlational design was used to conduct this study. Excel and SPSS were used to analyze the descriptive statistics; bivariate relationships and a regression model were used to determine the relationships among the variables. The prediction design allowed the researcher to find the likelihood of a relationship between outcomes by using the independent variables as predictors (Creswell, 2005). Logistic regression analysis was used to examine multiple variables to determine the possibility that a variable has a significant effect on the dependent dichotomous variable: "Logistic regression is the statistician's method of choice when the outcome is a dichotomous variable such as did/did not earn bachelor's degree" (Adelman, 1999b, p. 1). Adelman (1999b) also explained that logistic regression is like an epiphany: "It's [sic] results make a dramatic statement, the parameters of which are sometimes unexpected" (p.1). Finally, the demographic variables of age, gender, race or ethnicity, income, parent's education, and risk factors were used to shape a framework identifying characteristics of a successful community college student.

Academic research has a variety of nationally representative data available, which allows for systematic studies. Academic and institutional researchers are increasingly using these data for comparison studies (Thomas & Heck, 2001). One of the most widely used secondary data sources in higher education research is prepared by the National Center for Education Statistics (NCES), which is overseen by the US Department of Education. The secondary data sets provide "high quality data, are easy to access, have well publicized financial incentives and increasingly

sophisticated technology that permits powerful analysis of large data sets which introduces stimulating research opportunities” (Thomas & Heck, 2001, p. 518).

Population

The National Education Longitudinal Study of 1998 (NELS:88) is a nationally representative sample of individuals who were eighth graders in the spring of 1988, ready to begin their postsecondary education in 1992. A sample of these respondents was surveyed through four follow-ups in 1990, 1992, 1994, and 2000. The NELS:88 data allowed the tracking of postsecondary enrollment patterns and the outcomes of students through 2000 (US Department of Education, 2002a).

A unique feature of NELS:88 was the virtual self-weighting process. Schools were oversampled in certain special strata to ensure that policy-relevant subgroups would be adequately represented in the sample (US Department of Education, 2002a). Participation included 815 public and 237 private schools. There was a greater number representation of small private schools, which impacted the within-school strategy of oversampling Hispanics and Asian or Pacific Islanders. Excluded from the NELS:88 sample were US Department of Interior-supported Bureau of Indian Affairs schools, special education schools for persons with severe disabilities, area vocational schools that did not enroll students directly, and US Department of Defense dependents schools. In general, the student population excluded students with severe mental disabilities, students whose command of the English language would impact responses, and students with physical or emotional disabilities that presented difficulties with survey participation (US Department of Education, 2002a).

For the purpose of this study, data on the community college student was extracted from the population of NELS:88, which used a two-stage, stratified sample design. SPSS was used to access the supplied raw data and to create the extractions. The extractions for the dichotomous dependent variable included enrollment in the community college, identified by the code F4ELSECT, which determined if the student had ever taken classes at the community college. The dichotomous dependent variable also included student success, which was identified by

F4EDGR1&2, representing degree attainment. The researcher tracked the community college student by age, gender, race or ethnicity, income, parent's education, and risk factors.

Additionally, the researcher included descriptive statistics on four additional variables which were seen in the literature as factors which have been included in studies relating to the community college (McCabe 2000; Rafterty & VanWagoner, 2002; Cohen & Brawer, 2003; Matus-Grossman & Gooden, 2002; McClenney, 2004a). The researcher included data on a) remedial education, b) why the students enrolled at the community college versus a 4-year institution, c) whether work or study was the reason for employment, and d) why the student left the community college.

Instrumentation

This study used the NELS:88 data set and the four follow-ups in 1990, 1992, 1994, and 2000. The surveys included questionnaires for administrators, teachers, students, and parents. For the purpose of this study, the researcher extracted only the data relating to the students who attended the community college. After the population attending the community college was selected, the age, gender, race or ethnicity, income, parent's education, and risk factors were analyzed. Tables 1 and 2 show the relationship between the variables and the research questions.

Description of NELS:88 Fourth Follow-up Content Areas

Current activities: this section asked questions about the respondents' main activities at the time of the interview. These responses created the foundation for much of the remainder of the survey. This section also collected information about unemployment as well as current and former military service (US Department of Education, 2002a, p. 28).

Employment: the NELS:88 employment items collected data on job title, duties, salary, hours worked per week, job satisfaction, and autonomy for currently held job for pay or most recent job if not currently working (US Department of Education, 2002a, p. 28).

Job-related training: this section asked about job-related training received in the last 6 months of the current (or most recent) job. Interviewers questioned members of the sample cohort who

received such training, on the structure, purpose, and impact of their job-related training activities (US Department of Education, 2002a, p. 29).

High School completion: this section updated high school completion information for those who had not completed high school by 1994 or who were not interviewed in 1994. Interviewers asked students who had obtained a GED their reasons for completing their high school programs with the equivalency exam and whether they participated in a GED study program (US Department of Education, 2002a, p. 29).

Postsecondary education: this section collected the names, locations, and IPEDS codes for all postsecondary institutions attended by sample members since high school graduation, degrees or certificates obtained, date of degree/certificate, and field of study. This section also collected information about postsecondary education experiences and aspirations (US Department of Education, 2002a, p. 29).

Adult education: this section explored the ways in which respondents engage in learning beyond formal postsecondary education and job-related training (US Department of Education, 2002a, p. 29).

Family formation: this section collected data on current marital status, including the dates of marriage and how marriages ended (if applicable); household composition; number of dependents and children; and birth dates of the oldest and youngest children (US Department of Education, 2002a, p. 29).

Income and expenses: this section collected information about respondents and their spouses' or partners' income in 1999, 1998, and 1997. This section also collected other measures of financial condition, such as current housing status and public assistance (US Department of Education, 2002a, p. 29).

Other outcomes: this section asked questions that focused on integration with and involvement in the community—and on health-related issues, including cigarette and alcohol use (US Department of Education, 2002a, p. 29).

Race, ethnicity, residence: this section collected multiracial responses and included greater specificity for Asian and Native Hawaiian or Pacific Islander races, in accordance with new federal standards for the collection of information on race and ethnicity. This section also included an item on the racial-ethnic diversity of the respondents' work and residential communities. The section concluded with information on the respondents' current place of residence, which can be used, in conjunction with locations during the previous follow-up and base-year surveys, to examine the mobility of young adults (US Department of Education, 2002a, p. 30).

Table 1

Research Questions with NELS:88 Variables

Variables	Main and Supporting Research Questions
F2BIRTHY/F4RACEM/ F2PARED/F4EPARTT/F4GNDP YRRECY/F4EFMY	1. What are the distinguishing characteristics of successful community college students?
F2BIRTHY	1. Is there a correlation between a student's age and student success?
F4SEX	2. Is there a correlation between a student's gender and student success?
F4RACEM	3. Is there a correlation between a student's race/ethnicity and student success?
F4HI99	4. Is there a correlation between a student's income and student success?
F2PARED	5. Is there a correlation between a student's parents' education and student success?
F4EFMY/ YRRECY/ F4EPARTT/ F4HI99 F4HPOVTH/ F4GNDP F4SGPAR/ F4A12KP F4EDGR1&2	6. Is there a correlation between a student's risk factors and student success?

Table 2

Legend for Variables

Risk Factors	F4EFMY – Date first attended PSE
	YRRECY – Date received diploma, GED Certificate
	F4EPARTT – Attended part-time
	F4HI99 – Annual earnings from employment in 1999
	F4HPOVTH – Poverty threshold
	F4GNDP – Dependents, excluding self/spouse/partner
	F4SGPAR - Single parent
	F4A12KP – Worked part-time
Student Characteristics	F2BIRTHY- Birth year
	F2PARED - Parents' highest education
	F4SEX - Sex
	F4RACEM - New definition of race with multiple choice
	F4HI99 - Annual earnings from employment in 1999
	F4HPOVTH - Poverty threshold
Earned an Associate Degree	F4EDGR1&2 - Earned Associate degree
Non-degree Recipients	F4ELSECT – level of postsecondary institution attended
NELS:88 Data Collection	BY - Base Year (1988)
Waves	F1 - First Follow-up (1990)
	F2 - Second Follow-up (1992)
	F3 - Third Follow-up (1994)
	F4 – Fourth Follow-up (2000)

Limitations

1. Non-sampling errors are identified as coverage errors. This type of error is described by the US Department of Education (1996) as the failure to include the entire universe of interest in the population.
2. Secondary data sampling is structured and cannot to be modified, although the sample was “freshened” during the first two follow up studies.

Data Preparation and Collection

The data for this research was extracted from the NELS:88 data base with the six student characteristics of age, gender, race or ethnicity, income, parent’s education, and risk factors isolated to determine the impact of the student characteristics on community college student success. Extracting the data from NELS:88 represents the use of a secondary analysis. This researcher analyzed data collected by the Department of Education in NELS:88 using SPSS and Excel.

The first follow-up (F1) of NELS:88 provided an opportunity for longitudinal measurement from the 1988 baseline. The second follow-up (F2) was completed while the sample members were seniors in high school. The third follow-up (F3) occurred when most sample members had completed high school. The fourth follow-up (F4) was collected after many sample members had completed college, started or changed careers, and started families. There were a total of 12,144 students in the fourth year follow-up sample (US Department of Education, 2002a).

Data from NELS:88 allowed for the examination of a more current cohort of students. Almost 25,000 students from across the nation participated in the base year study from 1,052 schools. The last follow-up in 2000 included interviews with 12,144 of the three NELS:88 sample cohorts, which included 2496 community college students, 12 years after the base year data collection. NELS:88 provided longitudinal information on more recent community college students (US Department of Education, 2002a).

Data Analysis

The intent of this quantitative study was to isolate characteristics that predict student success. Descriptive statistics, bivariate relationships, and a binary regression model were used for the analysis. Each stage of analysis added data to the study by providing more depth with each statistical process. Pearson chi-square was calculated on each of the student characteristics and risk factors. The Pearson chi-square was used to complete an analysis to assess which predictor variables should be included in the model (Hosmer & Lemeshow, 2000). Chi-square is appropriate for comparing categorical variables (Hosmer & Lemeshow, 2000). The results of chi-square were statistically significant if there was less than a 5% chance of being wrong. This also informed how likely it was that a relationship existed. Pearson r was used to measure the strength of the relationship between each predictor variable that was statistically significant in the logistic regression analysis; the higher the value of r , the stronger the relationship (Virginia Tech, 1999). With chi-square, a higher value means only that one can be more confident that the relationship is really there.

Using logistic analysis allowed variables to enter the analysis separately. Logistic regression was used to determine the percent of variance in the independent variables, and to understand the impact of the covariate control variables. The impact of predictor variables is usually explained in terms of odds ratios. Logistic regression calculates changes in the odds of the dependents. The regression analysis allowed the researcher to determine the degree of influence of the predictor variables, age, gender, race or ethnicity, income, parents' education, and risk factors on the dichotomous dependent variable, degree recipient or non-degree recipient. The regression analysis allowed the researcher to go beyond correlation by estimating how much change in the dependent variables are produced by a change in the independent variables (Monette, Sullivan, & DeJong, 2005).

The study used SPSS and Excel to process the NELS:88 data. Descriptive statistics of the independent variables was offered to show selected comparisons presented as cross tabulations and comparative tables. Logistic regression was used to determine the relationship of

the variables included in the analysis. This procedure allowed the researcher to identify strengths and relationships among variables. Osborne (2000) reported regression can be used for explanatory purposes when researchers explore relationships between multiple variables within a sample. The results will determine which independent variables in the analysis best contributed to the success of community college students.

The Base-Year to Fourth Follow-up Data File User's Manual (US Department of Education, 2002a) noted that a weighting process was applied to all rounds of the NELS:88 data; therefore, a weighting process was not utilized in this study. The weighting process compensated for unequal probabilities of selection and made adjustment for the effects of non-response. In the base year, sample weights were based on the inverse of the probabilities of selection into the sample and on non-response adjustment factors (p. 65). In the waves that followed the base year NELS: 88, weights were estimated that allowed analysis of key panel and cross-sectional populations (p. 70). Weighting adjusts for unequal probabilities of selection in the sample design, allowing the study to maintain representation of the target population (Thomas & Heck, 2001).

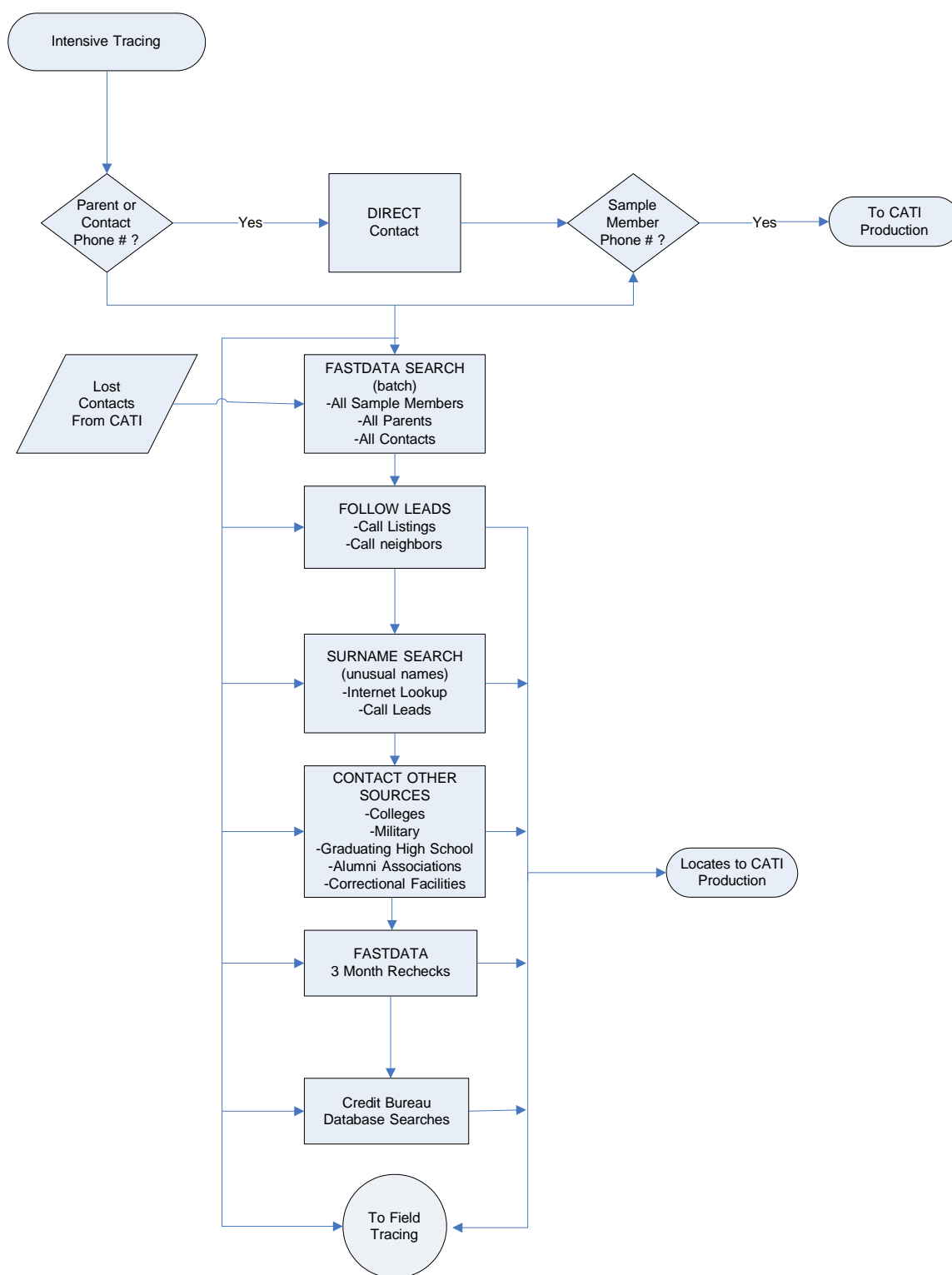


Figure 4. NELS:88 fourth follow-up study intensive tracing activities: 2000

Validity and Reliability

“NELS: 88 represents an integrated system of data that tracked students from middle school through secondary and postsecondary education, labor market experiences, and marriage and family formation” (US Department of Education, 2002a, p. 5). The research team enhanced the data collection instrument with each wave of NELS:88, to maintain similar content and form among instruments. The goal was to identify new data elements appropriate for the age and experience of the participants. One year before each wave of the follow-up, the research team field-tested data collection procedures and instruments. The field tests were used to inform planning, improve the measurement properties of the questionnaire items, and identify items that needed to be modified or deleted to improve the instrument length or item format (US Department of Education, 2002a).

For the purpose of this study, data on the community college were extracted from the population of NELS:88 , which used a two-stage, stratified sample design. The extractions from the raw data for the dichotomous dependent variable included enrollment in the community college. The researcher tracked the community college student by age, gender, race or ethnicity, income, parents' education, and risk factors. The study's findings should generalize to and represent the population of community college students.

Summary

This chapter provided a discussion of the quantitative predictive correlational design, which consisted of descriptive statistics, cross tabulation, and regression analysis, and explained how the community college data were extracted and analyzed. The researcher extracted six characteristics from the national study believed to correlate with community college student success.

CHAPTER 4

FINDINGS AND DISCUSSION

This chapter discusses the findings regarding the research questions, hypotheses, relationship between the dichotomous dependent variable and the independent variables. This chapter is organized to report data in the form of descriptive statistics, bivariate relationships, and binary logistic regression in addition to the summary of findings presented in a data analysis schema.

Purpose of the study

The purpose of this quantitative study was to find predictors of student success. Using a predictive correlational design, the intent of this study was to find the relationships between the dichotomous dependent variable with the categories, degree recipients and non-degree recipients, and the independent variables student characteristics and risk factors. Specifically, this study was used to extract variables and find relationships that may predict the success of the community college student from the 12 year period of data collection covered by the base-year (BY) and four follow-up studies (F1, F2, F3,F4) of NELS:88. For the purpose of this study, student success is defined as degree attainment at the community college. The population included 1137 students who earned the associate degree and 2496 students who attended the 2-year public institution and did not receive an associate degree.

Research Questions

The following research questions were addressed:

1. What are the distinguishing characteristics of successful community college students?

The distinguishing characteristics of successful community college students were found in the student characteristics: age, race, and parents' education. The distinguishing characteristics of risk factors were found in: delayed enrollment, part-time enrollment, and dependents.

These distinguishing characteristics were identified in the conceptual framework as inputs which influenced the student at the time of entry. Age has a positive influence on degree

recipients who wait to attend the community college; race also has a positive influence if the student is White not Hispanic and seeking the associate degree; finally, the students parents' who graduated from college or higher positively impacts the student seeking an associate degree.

Similarly, the risk factors identified as distinguishing characteristics were found in the variables delayed enrollment and dependents which had a negative influence on the degree recipient, while part-time enrollment had a positive influence on degree recipients.

Additionally, there is a correlation between student characteristics, risk factors and the academic success of community college students. Specifically, as age increases by one year there is a 1.3% chance of receiving the associate degree; Asian or Pacific Islanders are 38% less likely than Whites to receive the associate degree and Black not Hispanic are 44% less likely than Whites to receive the associate degree; participants parents' with the highest education level of high school or less and participants parents' with some college are 72% less likely than participants with parents' who graduated from college or higher to earn the associate degree. For every year participants delayed entry to the community college they are less than two times likely to obtain the associate degree; participants who enrolled part-time are almost two and a half times more likely to receive the associate degree; and participants with dependents are 45% less likely to receive the associate degree.

The positive or negative influence of the student characteristics or input identified in Astin's I-E-O model should be addressed through programs, policies, faculty, peers, and educational experiences at the community college which is identified in the conceptual framework as the environment.

The following supporting research questions were addressed:

1. Is there a correlation between a student's age and student success?

There is a positive relationship between a student's age and student success.

2. Is there a correlation between a student's gender and student success?

There is no correlation between a student's gender and student success.

3. Is there a correlation between a student's race or ethnicity and student success?

There is a negative relationship between a student's race or ethnicity and student success if the student is Asian or Pacific Islander and Black not Hispanic.

4. Is there a correlation between a student's income and student success?

There is no relationship between a student's income and student success.

5. Is there a correlation between a student's parents' education and student success?

There is a negative relationship between a parents' education and student success if the parents' highest education is level is high school or less and if the parents' highest education level is some college.

6. Is there a correlation between a student's risk factors and student success?

There is a negative relationship between delayed entry, dependents and student success and a positive relationship between part-time attendance and student success.

Hypotheses

Ho₁. There is no statistically significant correlation between age and student success.

Age was found to be a statistically significant predictor of student success at $p = .000$. Therefore, the researcher accepts the alternative. The Exp(B) 1.290 for age indicated a positive relationship between age and receiving the associate degree. As age increased by one year, there was a 1.3% chance of receiving the associate degree.

Ha₁ There is a statistically significant correlation between age and student success.

This hypothesis was supported by the bivariate logistic regression model.

Ho₂ There is no statistically significant correlation between gender and student success.

Gender was found to not be a statistically significant predictor of student success at $p = .316$. Based on the results of the Pearson chi-square test the variable was not included in the binary regression analysis.

Ha₂ There is a statistically significant correlation between gender and student success.

This hypothesis was not supported by Pearson chi-square.

Ho₃ There is no statistically significant correlation between race and student success.

Race was found to be a statistically significant predictor of student success at $p = .009$. Therefore the researcher accepts the alternative. The bivariate logistic regression model proved specifically that Asian or Pacific Islander (38%) and Blacks not Hispanics (44%) were less likely to get an associate degree than Whites. There was no significance for American Indian or Alaska native, more than one race or Hispanic participants.

Ha₃ There is a statistically significant correlation between race and student success.

This hypothesis was supported by the bivariate logistic regression model.

Ho₄ There is no statistically significant correlation between income and student success.

Income was found to not be a statistically significant predictor of student success at $p = .744$. Based on the results of the Pearson chi-square test the variable was not included in the binary regression analysis.

Ha₄ There is a statistically significant correlation between income and student success.

This hypothesis was not supported.

Ho₅ There is no statistically significant correlation between the parents' education and student success.

Parents' education was found to be a statistically significant predictor of student success at $p = .001$. Therefore the research accepts the alternative. The bivariate logistic regression model proved specifically that participants' parents education level of high school or less were 72% less likely to earn an associate degree than participants' whose parents graduated from college or higher. Similarly participants' parents with some college were 72% less likely to earn an associate degree than participants with parents who graduated from college or higher. The data reported on parents' education was compared to participants whose parents graduated from college or higher.

Ha₅ There is a statistically significant correlation between the parents' education and student success.

This hypothesis is supported by the bivariate logistic regression model.

Ho₆ There is no statistically significant correlation between risk factors and student success.

The hypothesis was found to be correct for financial independence, single parent status, and working part-time.

Ha₆ There is a statistically significant correlation between risk factors and student success.

This hypothesis was found to be correct for delayed enrollment, part-time enrollment and participants with dependents based on the bivariate logistic regression model.

Descriptive Statistics

The descriptive analysis was used to provide a baseline analysis of the participants in the study. This data provides a summary of all responses in the study. For this quantitative study, student success at the 2-year public institution was based on degree attainment. On the survey, student success was identified by F4EDGR1 and F4EDGR2, which represented the degree earned and F4ELSECT, which represented students who did not receive the degree. The frequencies for the dichotomous dependent variable were reported N=1137 for degree attainment and N=2496 for non-degree recipients.

In 2000, the age of the associate degree completer was between 25 and 28 with 70% or 778 age 26. Table 3 shows the non-degree completer had the same age span with 64% or 1561 age 26. This is similar to the Cohen and Brawer (2003) report that identified half the community college population was older than 24 (p. 37). This trend supports Dowd (2007) who reported that the community college provides access to non-traditional students who currently represent two-thirds of the community college enrollment. However, it varies from the 2008 AACC report which determined the average age of the community college student was 29. NELS:88 data are older and the age is slightly different than the 2008 AACC report. The students' age was slightly younger eight years ago. Data suggests the adults are returning to the community college for associate degrees; however they are delaying the enrollment approximately eleven years.

Table 3

Age of Degree Recipients and Non-degree Recipients

Year and Age	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
1972 or before (28)	26	2%	112	5%
1973 (27)	297	27%	731	30%
1974 (26)	778	70%	1561	64%
1975 or after (25)	13	1%	20	.8%
Total	1114*	100%	2424*	100%

Note: 23 degree recipients did not participate. 72 non-degree recipients did not participate.

Review of the student characteristics suggested the overall degree attainment for female associate degree recipients were higher than the male respondents. Table 4 shows 623 females earned an associate degree while 514 males earned an associate degree. The same table shows 53% or 1,323 of the females attended the 2-year public institution and did not receive the associate degree while 1,173 or 47% males attended the 2-year public institution and did not earn the associate degree. Cohen and Brawer (2003) also reported the number of women in community college continued to increase. These data are older and slightly less than the 2008 AACC report which identified 60% of the population served by the community college was female. However, the percentage did not show a considerable difference in an eight year period of time.

Table 4

Gender of Degree Recipients and Non-degree Recipients

Gender	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Male	514	45%	1173	47%
Female	623	55%	1323	53%
Total	1137	100%	2496	100%

Table 5 presents 768 or 69% of the respondents earning associate degrees were White, not Hispanic. The minority respondents represented 342 or 31% of the sample population. In the same table 1,542 or 63% of the respondents not earning associate degrees were White, not Hispanic. The minority respondents totaled 904 or 36% of the sample population. For minority students Cohen and Brawer (2003) reported, “the choice is not between the community college and the senior residential institution; it is between the community college and nothing” (p. 53). This data varies slightly from the 2008 AACC report which showed that 35% of the community college population were minority students: Black, Hispanic, Asian or Pacific Islander, and Native American. These data are older and show a slight difference over the eight year period of time. The data shows that minority students benefit from having access to the community college.

Table 5

Race or Ethnicity of Degree Recipients and Non-degree Recipients

Race or Ethnicity	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
American Indian or Alaska Native	10	.9%	35	1%
Asian or Pacific Islander	48	4%	117	5%
Black, not Hispanic	79	7%	231	9%
White, not Hispanic	768	69%	1542	63%
Hispanic or Latino	169	15%	447	18%
More than one race	36	3%	74	3%
Total	1110*	99%*	2446*	99%*

Note: 27 degree recipients did not participate. 50 non-degree recipients did not participate. The difference in total percent value is due to rounding.

Table 6 presents the total family income from all sources in 1999. There were more respondents with an associate degree earning between \$20,001 and \$30,000 per year. The total family income from all sources in 1999 for the respondents who did not receive a degree had more earnings within the same range. This is slightly different from the more recent reports from Cook and King (2004) and McSwain and Davis (2007). They reported a more recent trend where more women and single parents were categorized as low income. Income has the potential to impact degree attainment based on the efforts to limit costs. For example, community college tuition increased 22% in the last decade (Reindl, 2007).

Table 6

Total Family Income of Degree Recipients and Non-degree Recipients

Income	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
None	38	4%	116	5%
\$1 - \$10,000	124	12%	253	11%
\$10,001 - \$20,000	279	26%	654	28%
\$20,001 - \$30,000	329	31%	714	31%
\$30,001 - \$40,000	179	17%	365	16%
\$40,001 - \$50,000	75	7%	121	5%
\$50,001 - \$60,000	23	2%	50	2%
\$60,001 - \$70,000	6	.6%	25	1%
\$70,001 - \$100,000	4	.4%	13	.6%
\$100,001 – \$200,000	4	.4%	9	.4%
Total	1061*	100%	2320*	100%

Note: 76 degree recipients did not participate. 176 non-degree recipients did not participate.

Table 7 presents data that shows that most parents of the associate degree completers and non-degree recipients graduated from high school and attended some college. Barriers have been identified which were more likely to impact college students who are the first in their family to attend college compared to students who have at least one parent who has graduated from college (Pascarella et.al., 2004). Twenty-eight percent (7% + 21%) of the associate degree completers were first-generation college students and 34% (12% + 22%) of the non-degree recipients were first-generation college students. The 2008 AACC report showed 39% of community college students were the first generation to attend college. This shows a trend of increase from the NELS:88 data which was last updated in 2000.

Table 7

Parents' Education of Degree Recipients and Non-degree Recipients

Parents' Education	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Didn't finish HS	69	7%	256	12%
HS Grad or GED	222	21%	500	22%
HS, Some College	505	49%	1053	47%
College grad	151	15%	276	12%
MA or Equal	67	6%	106	5%
PhD or other	24	2%	39	2%
Total	1038*	100%	2230*	100%

Note: 99 degree recipients did not participate. 266 non-degree recipients did not participate.

Review of the respondents who were non-degree recipients show in Table 8 that all participants who entered after 1992 delayed enrollment between one and eight years. Degree recipients delayed entry to postsecondary education between one and six years. This is consistent with the trend of the non-traditional student. Currently the average age of the community college student is 29 which reflects an eleven year delay in entry after graduation from high school and greater delay from the time of the NELS:88 data (AACC, 2008).

Table 8

Date First Attended PSE for Degree Recipients and Non-degree Recipients

Date	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
1988	0	0	1	.04%
1989	0	0	2	.08%
1990	3	.3%	10	.4%
1991	19	2%	46	2%
1992	855	75%	1324	53%
1993	149	13%	467	18%
1994	38	3%	188	8%
1995	25	2%	111	4%
1996	22	2%	78	3%
1997	16	1%	78	3%
1998	8	.7%	84	3%
1999	0	0	62	3%
2000	0	0	26	1%
Total	1135*	99%*	2477*	99%*

Note: 2 degree recipients did not participate. 19 non-degree participants did not participate.

Difference in total percent value is due to rounding.

Additionally, Table 9 reveals 34% or 437 of the non-degree recipients attended postsecondary education less than one year as a full-time student. AACC (2008) reported 59% of community college students were enrolled part-time and 41% were enrolled full-time. These reports show that part-time enrollment had increased over eight years. Additionally, Matus-Grossman and Gooden (2002) reported community college students were more likely to attend part-time. Additionally, Table 10 identified 1,407 or 57% of the non-degree recipients enrolled part-time while 451 or 40% of the degree recipients enrolled part-time.

Table 9

Years of Full-time Postsecondary Course Work for Non-degree Recipients

Year	Non-degree	
	Recipients	Percent
Less than 1 year FT	437	34%
1 year FT	292	23%
More than 1, less than 2 year	262	20%
2 year FT	148	11%
More than 2 year FT	156	12%
Total	1295*	100%

Note: 1,201 non-degree recipients did not participate.

Table 10

Degree Recipients and Non-degree Recipients Who Attended Part-time

Response	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Part-time	451	40%	1407	57%
Full-time	664	60%	1041	43%
Total	1115*	100%	2448*	100%

Note: 22 degree recipients did not participate. 48 non-degree recipients did not participate.

In Table 11 the marital status and number of dependents the respondent was supporting defines the threshold. Utilizing the 2000 Census Bureau Report as a guide, all of the degree recipients and non-degree recipients fall below the poverty level. The poverty threshold data also supported Brock and LeBlanc (2005) and Tovar and Simon's (2006) findings that the community college provides access to students who otherwise would not have financial resources to attend.

Table 11

Poverty Threshold of Degree Recipients and Non-degree Recipients

Threshold	Degree		Non-degree		2000
	Recipients	Percent	Recipients	Percent	Census
\$8,480	457	41%	763	31%	\$8,794
Single+0 child					
\$10,915	333	30%	603	25%	\$11,531
Married+0 child					
\$11,235	55	5%	174	7%	\$11,869
Single+1 child					
\$13,120	153	14%	395	16%	\$13,861
Married + 1 child					
\$13,133	15	1%	73	3%	\$13,874
Single+2 child					
\$16,530	82	7%	305	12%	\$17,463
Married+2 child					
\$16,588	2	.2%	25	1%	\$17,524
Single+ 3 child					
\$19,453	19	2%	115	5%	\$20,550
Married+3 child					
Total	1116*	100%	2453*	100%	

Note: 21 degree recipients did not participate. 43 non-degree recipients did not participate.

Data revealed in Table 12 shows 1,104 or 44% of the non-degree recipients had dependents they supported other than themselves and their spouse and 334 or 29% of degree recipients had dependents they supported. Participants had other individuals to care for at a lower rate than participants who were single.

Table 12

Dependents of Degree Recipients and Non-degree Recipients

Dependents	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
0	801	71%	1389	56%
1	213	19%	581	23%
2	99	9%	380	15%
3	19	2%	111	4%
4	3	.3%	20	.8%
5	0	0	9	.4%
6	0	0	1	.04%
7	0	0	1	.04%
8	0	0	0	0
9	0	0	1	.04%
Total	1135*	101%*	2493*	100%

Note: 2 degree recipients did not participate. 3 non-degree participants did not participate. The difference in total percent value is due to rounding.

Table 13 shows 348 of the non-degree recipients were single parents and 101 or 9% of the degree recipients were single parents. This is slightly different from the 2008 AACC report. The report from AACC (2008) identified 17% of the population attended the community college as single parents. The trend over eight years has increased slightly.

Table 13

Single Parent Status of Degree Recipients and Non-degree Recipients

Response	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Yes	101	32%	348	34%
No	213	68%	682	66%
Total	314*	100%	1030*	100%

Note: 823 degree recipients did not participate. 1,466 non-degree participants did not participate.

Data reflected in Table 14 and Table 15 shows the majority of the participants in NELS:88 worked part-time or full-time during their enrollment at the community college. This is consistent with the complicated scenario of the community college student juggling work and family issues with enrollment at the community college (Bailey et al., 2005a; Tovar & Simon, 2006). The lack of financial resources compounds the postsecondary education experience.

Table 14

Degree Recipients and Non-degree Recipients Who Worked Part-time

Response	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Yes	227	20%	408	17%
No	886	80%	2038	83%
Total	1113*	100%	2446*	100%

Note: 24 degree recipients did not participate. 50 non-degree participants did not participate.

Table 15

Degree Recipients and Non-Degree Recipients Who Worked Full-time

Response	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Yes	878	79%	1881	77%
No	235	21%	565	23%
Total	1113*	100%	2446*	100%

Note: 24 degree recipients did not participate. 50 non-degree participants did not participate.

Data revealed in Table 16 and 17 shows 178 or 24% of the degree recipients enrolled in remedial English courses while 188 or 25% enrolled in remedial math courses. Non-degree recipients' data in Table 9 and 10 revealed 243 or 20% of the non-degree recipients enrolled in remedial English courses while 284 or 24% enrolled in remedial math courses. Developmental education is of particular concern to community colleges, where the majority of students needing developmental education are enrolled (McCabe, 2003).

However, the quality of open access college is dependent on remedial education and increasing the skills of the underprepared student to succeed in a college course (McCabe, 2000). Raftery and VanWagoner (2002) found remedial education had become an important part of the community college mission. Currently, the underprepared student attending the community college needs at least one of the basic subject areas of math, reading and writing (Zeidenberg, 2008). It is also important to remember that students in remedial courses and students in college-level courses may share the same goals to obtain a degree (Leinbach & Jenkins, 2008). There is evidence to support Leinbach and Jenkins (2008) in McCabe's 2000 study which reported 43% of community college remedial education students successfully completed their program (p. 31).

Table 16

Remedial English Courses for Degree Recipients and Non-degree Recipients

Response	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
English Yes	178	24%	243	20%
English No	576	76%	946	80%
Total	754*	100%	1189*	100%

Note: 383 degree recipients did not participate. 1,307 non-degree recipients did not participate.

Table 17

Remedial Math Courses for Degree Recipients and Non-degree Recipients

Response	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Math Yes	188	25%	284	24%
Math No	566	75%	903	76%
Total	754*	100%	1187*	100%

Note: 383 degree recipients did not participate. 1,309 non-degree recipients did not participate.

Table 18 illustrates the reasons why associate degree recipients and non-degree recipients enrolled in postsecondary education that was less than a 4-year college or university. The largest response for the degree recipient and the non-degree recipient was to obtain a degree or certificate. The lowest response for the degree recipient was to get job skills not requiring a degree while the non-degree recipients' lowest response was to transfer to another school. The literature supported that students attended the community college for a variety of reasons (Bailey et al., 2005b; Adelman, 2005b; US Department of Education, 2003b). The reasons may not include a degree or transfer (Bailey et al., 2005b). Brock and LeBlanc (2005) found some students who left the community college before completing the degree or transferring to another college or university, never intended to do more than take a few classes. By 2008, tuition was less than half of public 4-year institutions and 47% of the students received financial aid (AACC, 2008).

Table 18

Reason Degree Recipients and Non-degree Recipients Enrolled in Less Than 4-year PSE

Reason	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Job skills	51	9%	338	15%
Degree or certificate	393	69%	1157	50%
Transfer	61	11%	337	15%
Personal enrichment	63	11%	463	20%
Total	568*	100%	2295*	100%

Note: 569 degree recipients did not participate. 201 non-degree recipients did not participate.

Table 19 shows 67% of the associate degree completers worked for pay and not study while 65% of the non-degree recipients worked for pay and not study. The 2-year public institution did a better job limiting price increases, their tuition and fees had risen 22% in the past decade (Gladieux & Swail, 2000). However, while community college tuition is generally lower, students still juggled work and college attendance which can be a greater burden than paying tuition (Burdman, 2005; Matus-Grossman & Gooden, 2002). This is consistent with the frequencies reported from the NELS:88 data. Another report from the US Department of Education (2002c) reported two-thirds of highly nontraditional students perceived their primary role to be that of an employee, which suggested that school did not have first claim on their time and energy. Among highly nontraditional students who considered themselves primarily a student, many found that work limited their classes and scheduling options (US Department of Education, 2002c, p. 19).

Table 19

Work or Postsecondary Education Status of Degree Recipients and Non-degree Recipients

Status	Degree		Non-degree	
	Recipients	Percent	Recipients	Percent
Work for pay not study	764	67%	1628	65%
Study not work for pay	47	4%	100	4%
Work for pay and study	266	23%	528	21%
Neither work nor study	60	5%	239	10%
Total	1137	99%*	2495*	100%

Note: 1 non-degree recipient did not participate. The difference in total percent value is due to rounding.

The data in Table 20 shows the respondents that attended the 2-year postsecondary institution and did not receive the associate degree left for a variety of reasons. Two hundred and seventy-one left for financial reasons, 250 left for a job or the military, and 208 left because of a status change (marriage, death). This is not consistent with Tinto (1987, 2001) or Spady (1970). Tinto (1987, 2001) theorized that departure from college resulted from the student and college's inability to facilitate the students' sense of belonging or establishing membership within the college community. Nor is it consistent with Spady's (1970) research which focused on the process of student integration and highlighted the family background. Tinto (2001) also reported, institutions must recognize that attrition is not only about the students and their situation but also the character of the educational setting (p. 1). Additionally, McClenney (2004a) found community college students were three to four times more likely than students in four-year colleges to display factors that put them at risk of not completing their education (p. 11).

Table 20

Reason Why Non-degree Recipient Left School Before Degree

Reason	Non-degree	
	Recipients	Percent
Done taking desired classes	41	3%
Financial	271	21%
Family Change	208	16%
Personal problems, injury, illness	188	14%
Academic Problems	28	2%
Not satisfied with program, school, etc	57	4%
Classes not available or schedule	22	2%
Job military	250	19%
Moved from area	46	4%
Took time off from studies	68	5%
Doesn't fit lifestyle	93	7%
School lost accreditation	6	.4%
Other	35	3%
Total	1313*	100%

Note: 1,183 non-degree recipients did not participate.

Bivariate Relationships

The visual display of bivariate data shows the relationship between two variables. For the purpose of this study bivariate cross tabulations for each independent variable were compared between both categories of the dichotomous variable student success. Bivariate cross tabulations measured the relationship between the expected and observed counts for the two categories (Virginia Tech, 1999). Bivariate cross tabulations are a quick method to determine the strength of the association between two variables by examining the percentage difference across the two categories. As a result of the calculations, the relationship between each independent variable and students who received the degree or did not receive the degree is displayed.

In addition to cross tabulations, the Pearson chi-square is displayed for each independent variable (Appendix B). Chi-square is used for setting the significance level. A significance level or alpha level is the probability level that reflects the maximum risk the researcher is willing to take that any observed differences are due to chance (Creswell, 2005). Typically, the significance level is set at .01 (1 out of 100 times the sample score will be due to chance) or .05 (5 out of 100 times it will be due to chance). For the purpose of this study SPSS has calculated the exact significance therefore a significance level was not set.

Age

Table 21 presents a cross tabulation of data for the age of degree recipients and non degree recipients. Figure 5 is a graphical presentation of the data found in Table 21. The expected count of 26 year olds not receiving the associate degree was 1602.5 and the actual was 1561. Conversely, the expected count for the degree recipients was 736.5 and the actual count was 778. The Pearson chi-square test = 17.815, with $df = 3$, resulted in a significance level of .000. At $p = .000$, age is statistically significant. The researcher can conclude there is a difference in age of degree recipients and non-degree recipients.

Table 21

Relationship for Age Between Non-degree Recipients and Degree Recipients

Age	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
28	Count	112	26	138
	Expected Count	94.5	43.5	138.0
	% within AGE	81.2%	18.8%	100.0%
	% within ID	4.6%	2.3%	3.9%
	Residual	17.5	-17.5	
	Std. Residual	1.8	-2.6	
27	Count	731	297	1028
	Expected Count	704.3	323.7	1028.0
	% within AGE	71.1%	28.9%	100.0%
	% within ID	30.2%	26.7%	29.1%
	Residual	26.7	-26.7	
	Std. Residual	1.0	-1.5	
26	Count	1561	778	2339
	Expected Count	1602.5	736.5	2339.0
	% within AGE	66.7%	33.3%	100.0%
	% within ID	64.4%	69.8%	66.1%
	Residual	-41.5	41.5	
	Std. Residual	-1.0	1.5	

Relationship for Age Between Non-degree Recipients and Degree Recipients (continued)

Age	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
25	Count	20	13	33
	Expected Count	22.6	10.4	33.0
	% within AGE	60.6%	39.4%	100.0%
	% within ID	.8%	1.2%	.9%
	Residual	-2.6	2.6	
	Std. Residual	-.5	.8	
Total	Count	2424	1114	3538
	Expected Count	2424.0	1114.0	3538.0
	% within AGE	68.5%	31.5%	100.0%
	% within ID	100.0%	100.0%	100.0%

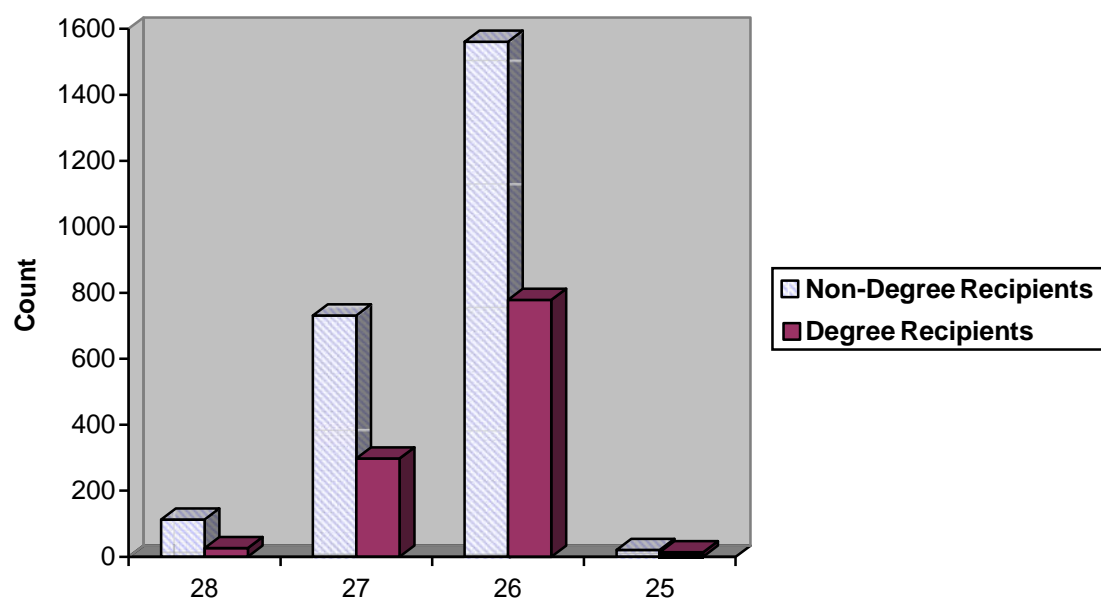


Figure 5. Bar Graph of Age Between Non-degree Recipients and Degree Recipients

Gender

Table 22 provides a cross tabulation of data for the gender of degree recipients and non-degree recipients. Figure 6 offers a graphical rendition of the data found in Table 22. As shown, more males (69.5%) were predicted into not receiving the associate degree than females (68%). Conversely, slightly more females 623 received the associate degree than males 514. The Pearson chi-square test = 1.005^a, with $df = 1$, resulted in a significance level of .316. At $p = .316$ gender is not statistically significant. The researcher can conclude there is no detectable difference between males and females receiving the associate degree.

Table 22

Relationship of Gender for Non-degree Recipients and Degree Recipients

Gender	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
Male	Count	1173	514	1687
	Expected Count	1159.0	528.0	1687.0
	% within GENDER	69.5%	30.5%	100.0%
	% within ID	47.0%	45.2%	46.4%
	Residual	14.0	-14.0	
	Std. Residual	.4	-.6	
Female	Count	1323	623	1946
	Expected Count	1337.0	609.0	1946.0
	% within GENDER	68.0%	32.0%	100.0%
	% within ID	53.0%	54.8%	53.6%
	Residual	-14.0	14.0	
	Std. Residual	-.4	.6	
Total	Count	2496	1137	3633
	Expected Count	2496.0	1137.0	3633.0
	% within GENDER	68.7%	31.3%	100.0%
	% within ID	100.0%	100.0%	100.0%

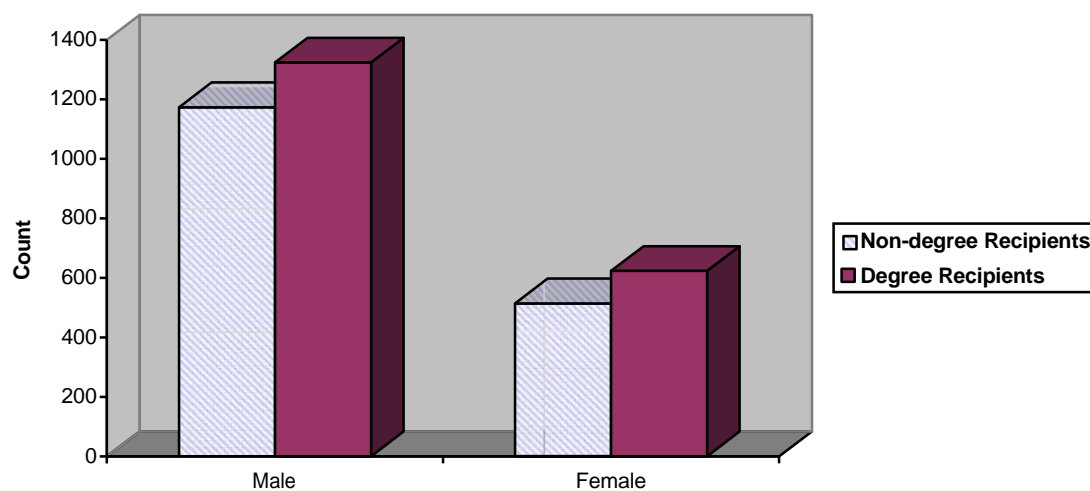


Figure 6. Bar Graph of Gender Relationship Between Non-degree Recipients and Degree Recipients

Race

Table 23 displays a cross tabulation of data for the race of degree recipients and non degree recipients. Figure 7 presents a graphical arrangement of the data found in Table 23. The expected count of White not Hispanic receiving the associate degree was 704.3 with the actual count being 731. On the contrary, 323.7 were expected for White not Hispanic who did not receive the associate degree and 297 was the actual count. On the other hand, the expected count of Black not Hispanic who received the degree was 736.5 with the actual count being 778. Black not Hispanic participants who were non-degree recipients had an expected count of 1,602.5 with the actual count being 1,561. The Pearson chi-square test = 15.441, with $df = 5$, resulted in a significance level of .009. At $p = .009$, race is statistically significant. The researcher can conclude there is a difference between race of degree recipients and non-degree recipients.

Table 23

Relationship for Race between Non-degree Recipients and Degree Recipients

Race	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
American Indian or Alaska Native	Count	112	26	138
	Expected Count	94.5	43.5	138.0
	% within RACE	81.2%	18.8%	100.0%
	% within ID	4.6%	2.3%	3.9%
	Residual	17.5	-17.5	
	Std. Residual	1.8	-2.6	
Asian or Pacific Islander	Count	731	297	1028
	Expected Count	704.3	323.7	1028.0
	% within RACE	71.1%	28.9%	100.0%
	% within ID	30.2%	26.7%	29.1%
	Residual	26.7	-26.7	
	Std. Residual	1.0	-1.5	
Black not Hispanic	Count	1561	778	2339
	Expected Count	1602.5	736.5	2339.0
	% within RACE	66.7%	33.3%	100.0%
	% within ID	64.4%	69.8%	66.1%
	Residual	-41.5	41.5	
	Std. Residual	-1.0	1.5	

Relationship for Race between Non-degree Recipients and Degree Recipients (continued)

Race	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
More than one race	Count	20	13	33
	Expected Count	22.6	10.4	33.0
	% within RACE	60.6%	39.4%	100.0%
	% within ID	.8%	1.2%	.9%
	Residual	-2.6	2.6	
	Std. Residual	-.5	.8	
Hispanic or Latino	Count	112	26	138
	Expected Count	94.5	43.5	138.0
	% within RACE	81.2%	18.8%	100.0%
	% within ID	4.6%	2.3%	3.9%
	Residual	17.5	-17.5	
	Std. Residual	1.8	-2.6	
White not Hispanic	Count	731	297	1028
	Expected Count	704.3	323.7	1028.0
	% within RACE	71.1%	28.9%	100.0%
	% within ID	30.2%	26.7%	29.1%
	Residual	26.7	-26.7	
	Std. Residual	1.0	-1.5	
Total	Count	1561	778	2339
	Expected Count	1602.5	736.5	2339.0
	% within RACE	66.7%	33.3%	100.0%
	% within ID	64.4%	69.8%	66.1%

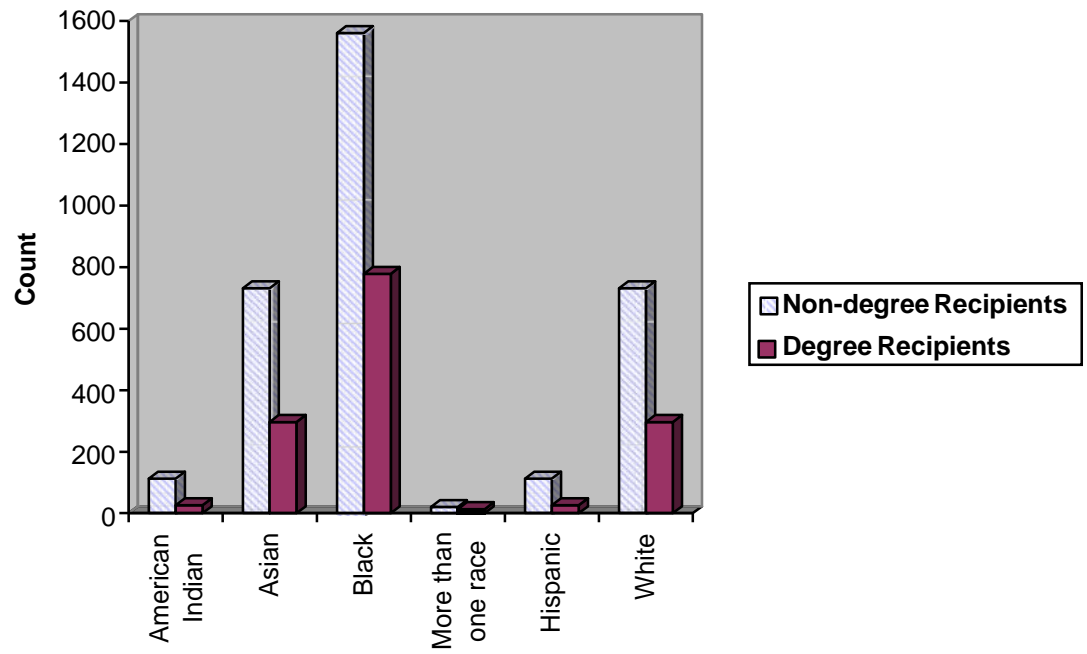


Figure 7. Bar Graph of Relationship for Race Between Non-degree Recipients and Degree Recipients

Income

Table 24 shows the cross tabulation of data for the income of degree recipients and non degree recipients. Figure 8 is a graphical interpretation of the data found in Table 24.

Approximately 30.5% of the non-degree recipients had an income between 0 and \$10,000 per year as compared to 69.5% of the degree recipients. The Pearson chi-square test = 1.953^a, with $df = 4$, resulted in a significance level of .744. At $p = .744$ income is not statistically significant and the conclusion is to fail to reject the null hypothesis. The researcher can conclude there is no detectable difference between income and who receives or does not receive the associate degree.

Table 24

Relationship for Income Between Non-degree Recipients and Degree Recipients

Income	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
0-\$10,000	Count	369	162	531
	Expected Count	364.8	166.2	531.0
	% within INCOME	69.5%	30.5%	100.0%
	% within ID	14.8%	14.2%	14.6%
	Residual	4.2	-4.2	
	Std. Residual	.2	-.3	
\$10,001-\$20,000	Count	654	279	933
	Expected Count	641.0	292	933.0
	% within INCOME	70.1%	29.9%	100.0%
	% within ID	26.2%	24.5%	25.7%
	Residual	13.0	-13.0	
	Std. Residual	.5	-.8	
\$20,001-\$30,000	Count	714	329	1043
	Expected Count	716.6	326.4	1043.0
	% within INCOME	68.5%	31.5%	100.0%
	% within ID	28.6%	28.9%	28.7%
	Residual	-2.6	2.6	
	Std. Residual	.0	.1	
\$30,001-\$40,000	Count	365	179	544
	Expected Count	373.7	170.3	544.0
	% within INCOME	67.1%	32.9%	100.0%
	% within ID	14.6%	15.7%	15.0%
	Residual	-8.7	8.7	
	Std. Residual	-.5	.7	

Relationship for Income Between Non-degree Recipients and Degree Recipients (continued)

Income	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
\$40,001 and above	Count	394	188	582
	Expected Count	399.9	182.1	582.0
	% within INCOME	67.7%	32.3%	100.0%
	% within ID	15.8%	16.5%	16.0%
	Residual	-5.9	5.9	
	Std. Residual	-.3	.4	
Total	Count	2496	1137	3633
	Expected Count	2498.0	1137.0	3633.0
	% within INCOME	68.7%	31.3%	100.0%
	% within ID	100%	100.0%	100.0%

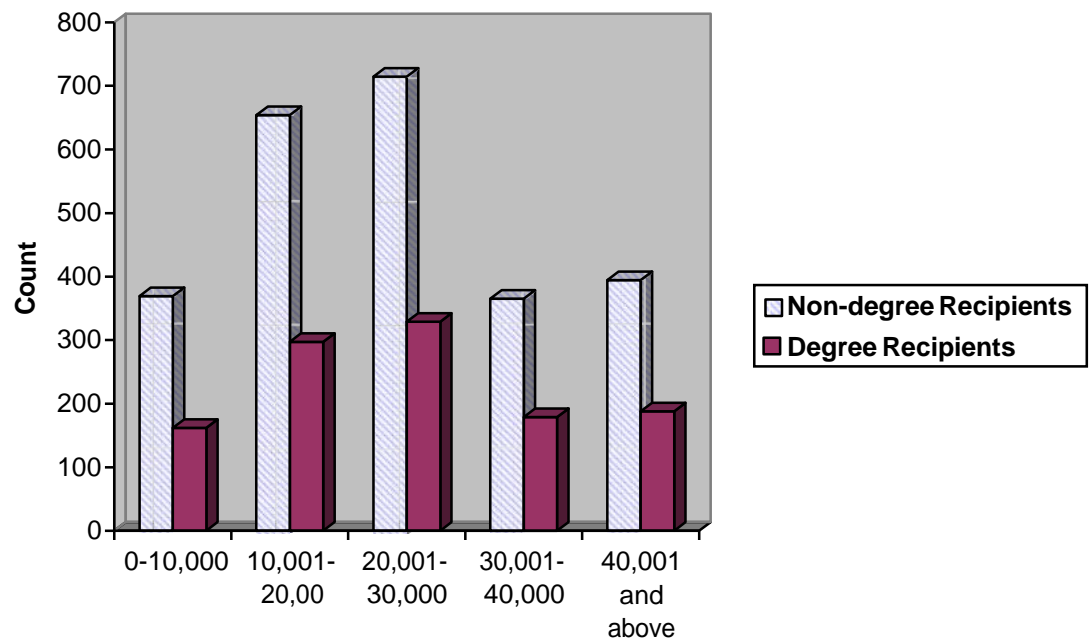


Figure 8. Bar Graph of Relationship for Income between Non-degree Recipients and Degree Recipients

Parent Education

Table 25 displays a cross tabulation of data for the parents' education of degree recipients and non degree recipients. Figure 9 supplies a graphical presentation of the data found in Table 25. The expected count for the non-degree recipients whose parents had a bachelor degree or higher were 162.4 with the actual count was 146. The degree recipients whose parents had a bachelor degree or higher equaled 38.7% of the population. The Pearson chi-square test = 14.337, with $df = 2$, resulted in a significance level of .001. At $p = .001$, parents' education is statistically significant. The researcher can conclude there is a difference between the parent's education for degree recipients and non-degree recipients.

Table 25

Relationship for Parents' Education Between Non-degree Recipients and Degree Recipients

Parent Education	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
High school or less	Count	756	291	1047
	Expected Count	714.3	332.7	1047.0
	% within PARENT ED	72.2%	27.8%	100.0%
	% within ID	33.9%	28.0%	32.0%
	Residual	41.7	-41.7	
	Std. Residual	1.6	-2.3	
Some college	Count	1329	656	1985
	Expected Count	1354.3	630.7	1985.0
	% within PARENT ED	67.0%	33.0%	100.0%
	% within ID	59.6%	63.1%	60.7%
	Residual	-25.3	25.3	
	Std. Residual	-.7	1.0	
College degree or higher	Count	146	92	238
	Expected Count	162.4	75.6	238.0
	% within PARENT ED	61.3%	38.7%	100.0%
	% within ID	59.6%	63.1%	60.7%
	Residual	-25.3	25.3	
	Std. Residual	-.7	1.0	
Total	Count	2231	1039	3270
	Expected Count	2231.0	1039.0	3270.0
	% within PARENT ED	68.2%	31.8%	100.0%
	% within ID	100.0%	100.0%	100.0%

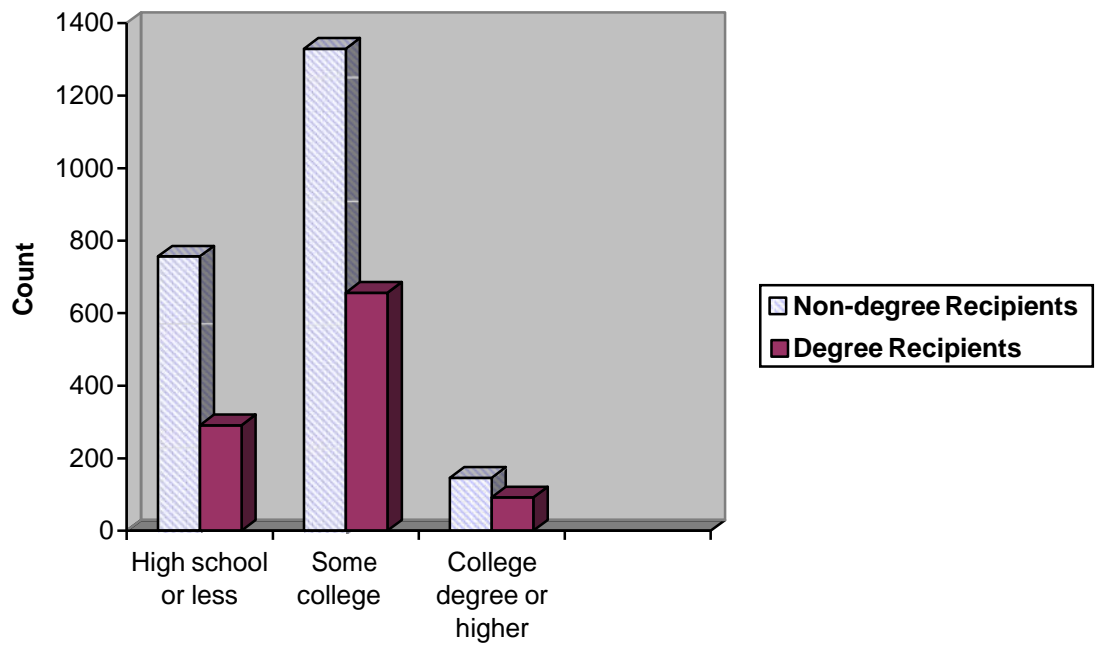


Figure 9. Bar Graph of Relationship for Parents' Education Between Non-degree Recipients and Degree Recipients

Delayed Enrollment

Tables 26, 27, and 28 present cross tabulations of data for the delayed enrollment of degree recipients and non degree recipients. Figures 10, 11, and 12 offer a graphical rendition of the data found in Tables 26, 27, and 28. The expected count for degree recipients who entered the 2-year public institution immediately after high school was 672.4 and the actual count was 804. The students who did not receive the degree equaled 1,249. The Pearson chi-square test = 1.584, with $df = 8$, resulted in a significance level of .000. At $p = .000$, delayed enrollment is statistically significant. The researcher can conclude there is a difference between degree recipients and non-degree recipients.

Table 26

Delayed Enrollment Between Non-degree Recipients and Degree Recipients

Delayed Entry	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
-8	Count	24	0	24
	Expected Count	16.1	7.9	24.0
	% within DELAY	100.0%	.0%	100.0%
	% within ID	1.1%	.0%	.7%
	Residual	7.9	-7.9	
	Std. Residual	2.0	-2.8	
-7	Count	51	0	51
	Expected Count	34.3	16.7	51.0
	% within DELAY	100.0%	.0%	100.0%
	% within ID	2.3%	.0%	1.5%
	Residual	16.7	-16.7	
	Std. Residual	2.9	-4.1	
-6	Count	75	0	75
	Expected Count	50.4	24.6	75.0
	% within DELAY	100.0%	.0%	100.0%
	% within ID	3.4%	.0%	2.3%
	Residual	24.6	-24.6	
	Std. Residual	3.5	-5.0	
-5	Count	68	8	76
	Expected Count	51.1	24.9	76.0
	% within DELAY	89.5%	10.5%	100.0%
	% within ID	3.0%	.7%	2.3%
	Residual	16.9	-16.9	
	Std. Residual	2.4	-3.4	

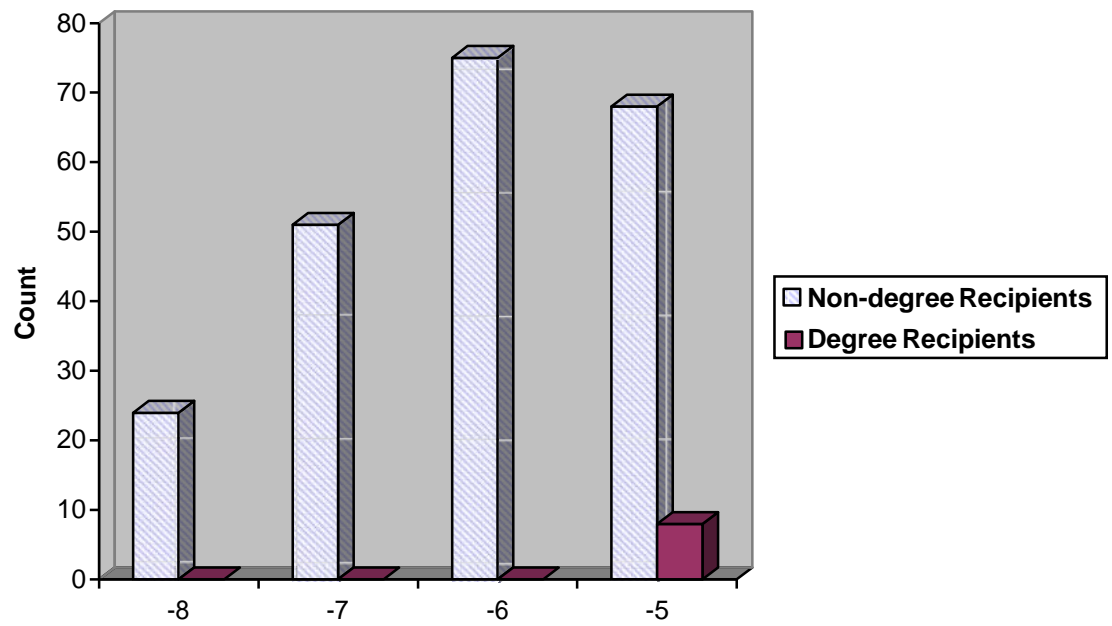


Figure 10. Bar Graph of Delayed Enrollment Between Non-degree Recipients and Degree Recipients More Than 4 Years

Table 27

Delayed Enrollment for Non-degree Recipients and Degree Recipients (continued)

Delayed Entry	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
-4	Count	69	39	108
	Expected Count	72.6	35.4	108.0
	% within DELAY	63.9%	36.1%	100.0%
	% within ID	3.1%	3.6%	3.3%
	Residual	-3.6	3.6	
	Std. Residual	-.4	.6	
-3	Count	97	26	123
	Expected Count	82.7	40.3	123.0
	% within DELAY	78.9%	21.1%	100.0%
	% within ID	4.3%	2.4%	3.7%
	Residual	14.3	14.3	
	Std. Residual	1.6	-2.3	
-2	Count	170	42	212
	Expected Count	142.6	68.4	212.0
	% within DELAY	80.2%	19.8%	100.0%
	% within ID	7.6%	3.9%	6.5%
	Residual	27.4	-27.4	
	Std. Residual	2.3	-3.3	
-1	Count	427	167	594
	Expected Count	399.5	194.5	594.0
	% within DELAY	71.9%	28.1%	100.0%
	% within ID	19.1%	15.4%	17.9%
	Residual	27.5	-27.5	
	Std. Residual	1.4	-2.0	

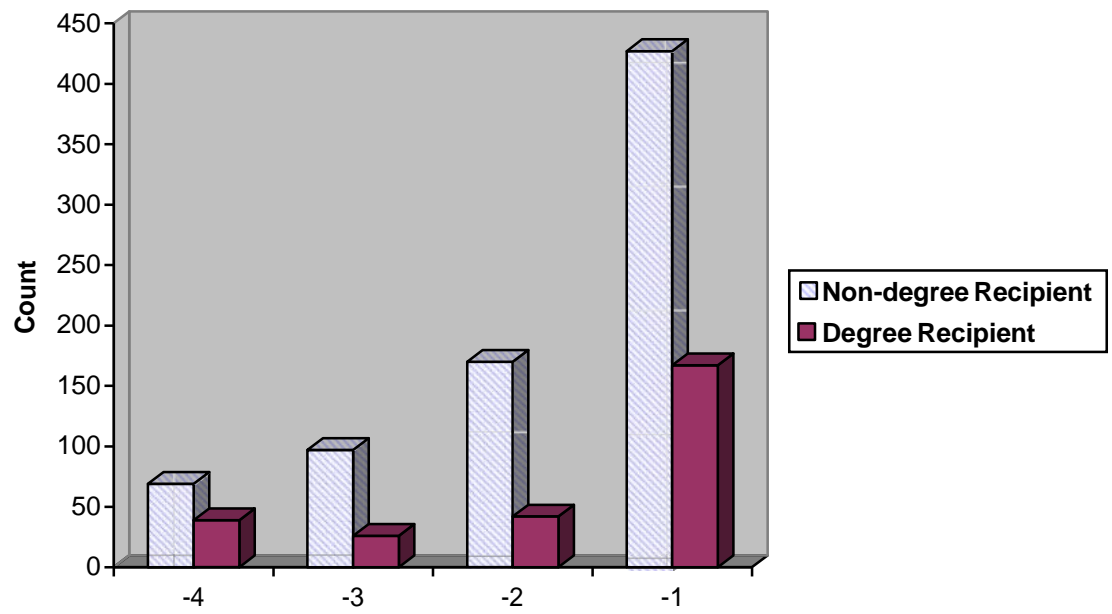


Figure 11. Bar Graph of Delayed Enrollment for Non-degree Recipients and Degree Recipients
One to Four Years

Table 28

Delayed Enrollment for Non-degree Recipients and Degree Recipients (continued)

Delayed Entry	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
0	Count	1249	804	2053
	Expected Count	1380.6	672.4	2053.0
	% within DELAY	60.8%	39.2%	100.0%
	% within ID	56.0%	74.0%	61.9%
	Residual	-131.6	131.6	
	Std. Residual	-3.5	5.1	
Total	Count	2230	1086	3316
	Expected Count	2230.0	1086.0	3316.0
	% within DELAY	67.2%	32.8%	100.0%
	% within ID	100.0%	100.0%	100.0%

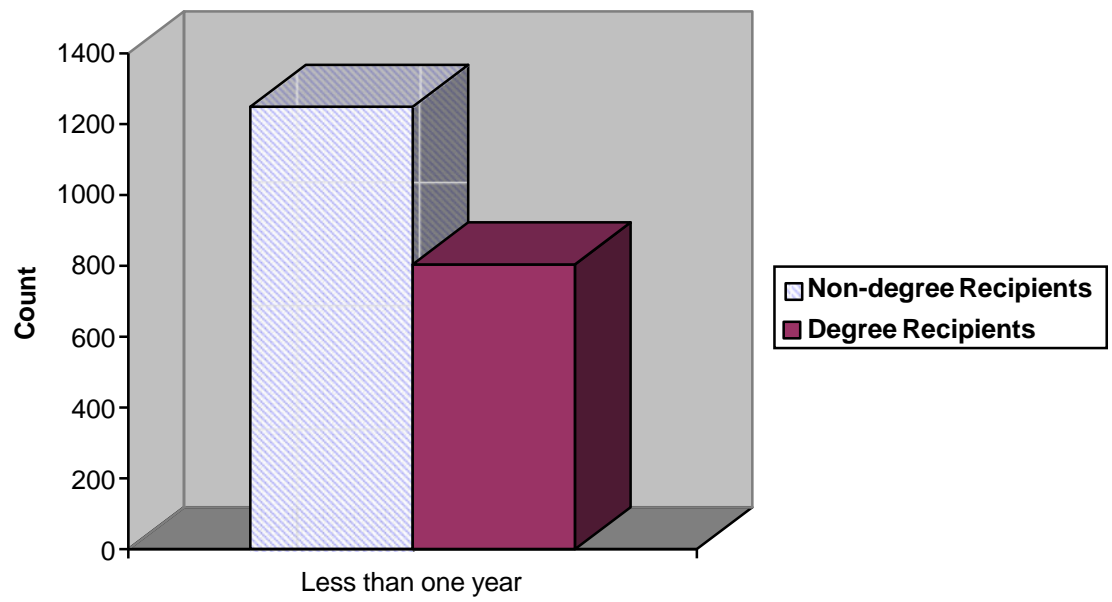


Figure 12. Bar Graph of Delayed Enrollment for Non-degree Recipients and Degree Recipients

Less Than One Year

Part-time Enrollment

Table 29 illustrates a cross tabulation of data for part-time enrollment of degree recipients and non degree recipients. Figure 13 presents a graphical rendition of the data found in Table 29. There was a difference of 387 (664-451) between students who received the associate degree and enrolled part-time and those who did not enroll part-time. Comparatively, the students who did not receive the associate degree had a difference of 366 (1,041-1,407) between students without the degree who did enroll part-time. The Pearson chi-square test = 89.004, with $df = 1$, resulted in a significance level of .000. At $p = .000$, part-time enrollment is statistically significant. The researcher can conclude there is a difference between the part-time enrollment of the degree recipient and the non-degree recipient.

Table 29

Relationship for Part-time Enrollment Between Non-degree Recipients and Degree Recipients

Enrolled part-time	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
No	Count	1041	664	1705
	Expected Count	1171.4	533.6	1705.0
	% within PT Enroll	61.1%	38.9%	100.0%
	% within ID	42.5	59.6%	47.9%
	Residual	-130.4	130.4	
	Std. Residual	-3.8	5.6	
Yes	Count	1407	451	1858
	Expected Count	1276.6	581.4	1858.0
	% within PT Enroll	75.7%	24.3%	100.0%
	% within ID	57.5%	40.4%	52.1%
	Residual	130.4	-130.4	
	Std. Residual	3.7	-5.4	
Total	Count	2448	1115	3563
	Expected Count	2448.0	1115.0	3563.0
	% within PT Enroll	68.7%	31.3%	100.0%
	% within ID	100.0%	100.0%	100.0%

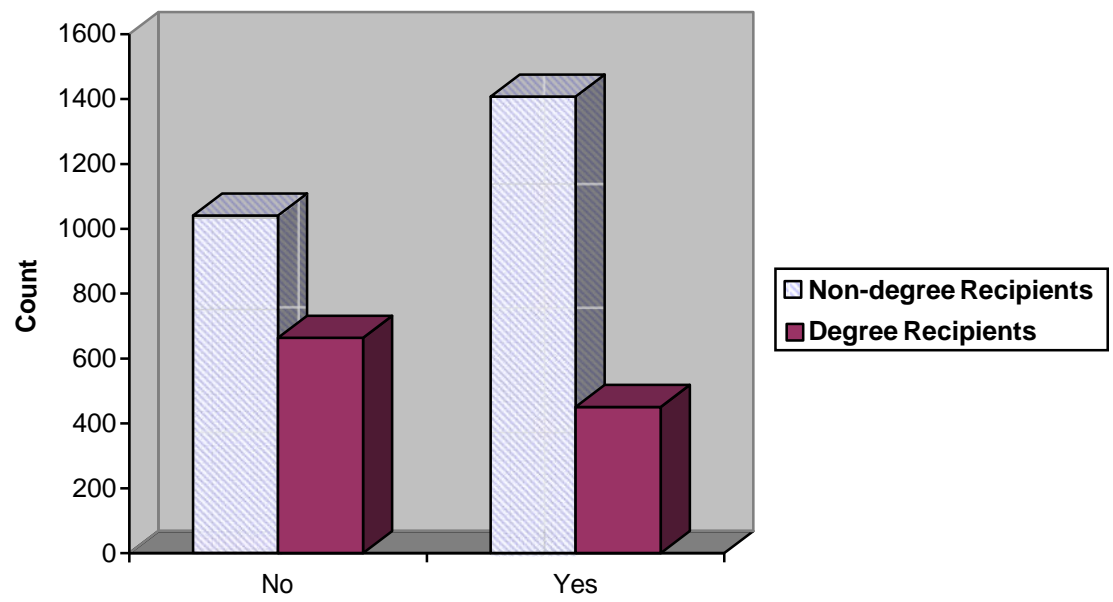


Figure 13. Bar Graph of Relationship for Part-time Enrollment Between Non-degree Recipients and Degree Recipients

Poverty Threshold

Tables 30, 31, 32, and 33 exhibit cross tabulations of data for the poverty threshold of degree recipients and non degree recipients. Figures 14, 15, 16, and 17 are graphical presentations of the data found in Table 30. The expected count of the poverty threshold for students with a degree and no children was 381.5 and the actual count was 457. Within the dichotomous variable this population represents 34.2% of the total population. The Pearson chi-square test = 90.241, with $df = 7$, resulted in a significance level of .000. At $p = .000$, the poverty threshold is statistically significant. The researcher can conclude there is a difference between the poverty threshold of degree recipients and non-degree recipients.

Table 30

Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients

(continued)

Poverty Threshold	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
\$8,480 Single and no children	Count	763	457	1220
	Expected Count	838.5	381.5	1220.0
	% within POVERTY	62.5%	37.5%	100.0%
	% within ID	31.1%	40.9%	34.2%
	Residual	-75.5	75.5	
	Std. Residual	-2.6	3.9	
\$10,915 Married and no children	Count	603	333	936
	Expected Count	643.3	292.7	936
	% within POVERTY	64.4%	35.6%	100.0%
	% within ID	24.6%	29.8%	26.2%
	Residual	-40.3	40.3	
	Std. Residual	-1.6	2.4	

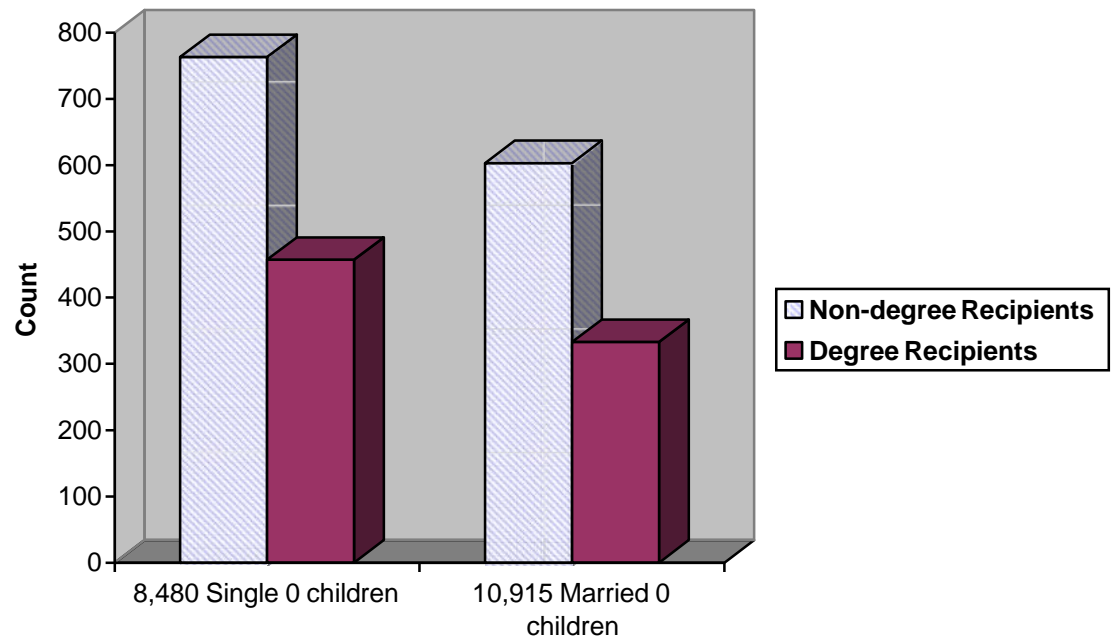


Figure 14. Bar Graph of Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients With No Children

Table 31

Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients

(continued)

Poverty Threshold	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
\$11,235 Single and one child	Count	174	55	229
	Expected Count	157.4	71.6	229.0
	% within POVERTY	76.0%	24.0%	100.0%
	% within ID	7.1%	4.9%	6.4%
	Residual	16.6	-16.6	
	Std. Residual	1.3	-2.0	
\$13,120 Married and one child	Count	395	153	548
	Expected Count	376.6	171.4	548.0
	% within POVERTY	72.1%	27.9%	100.0%
	% within ID	16.1%	13.7%	15.4%
	Residual	18.4	-18.4	
	Std. Residual	.9	-1.4	

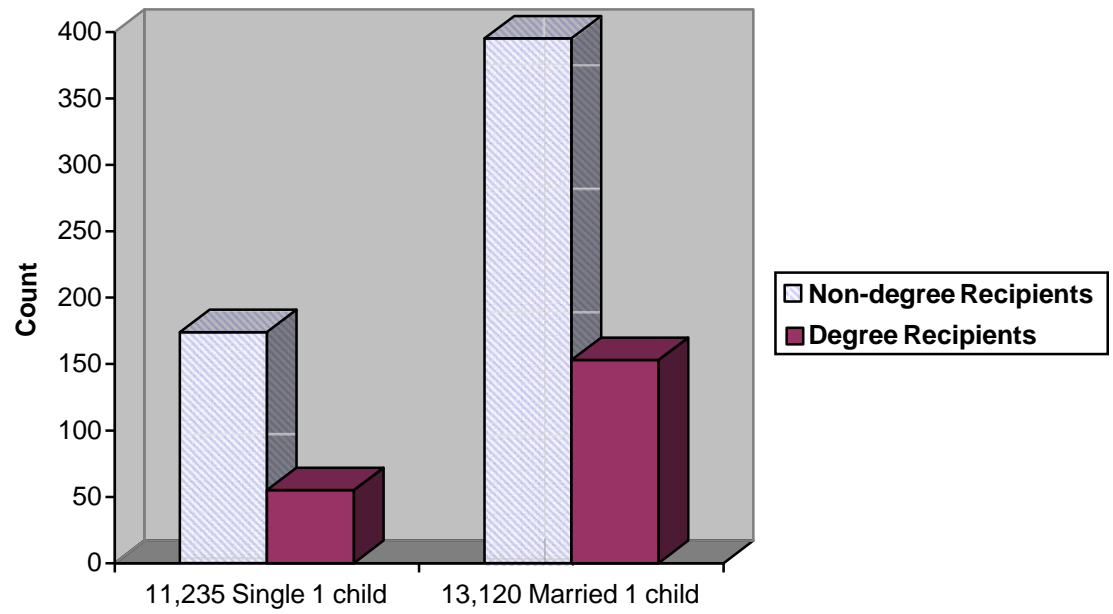


Figure 15. Bar Graph of Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients With One Child

Table 32

Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients

(continued)

Poverty Threshold	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
\$13,133 Single and two children	Count	73	15	88
	Expected Count	60.5	27.5	88.0
	% within POVERTY	83.0%	17.0%	100.0%
	% within ID	3.0%	1.3%	2.5%
	Residual	12.5	-12.5	
	Std. Residual	1.6	-2.4	
\$16,530 Married and two children	Count	305	82	387
	Expected Count	266.0	121.0	387.0
	% within POVERTY	78.8%	21.2%	100.0%
	% within ID	12.4%	7.3%	10.8%
	Residual	39.0	-39.0	
	Std. Residual	2.4	-3.5	

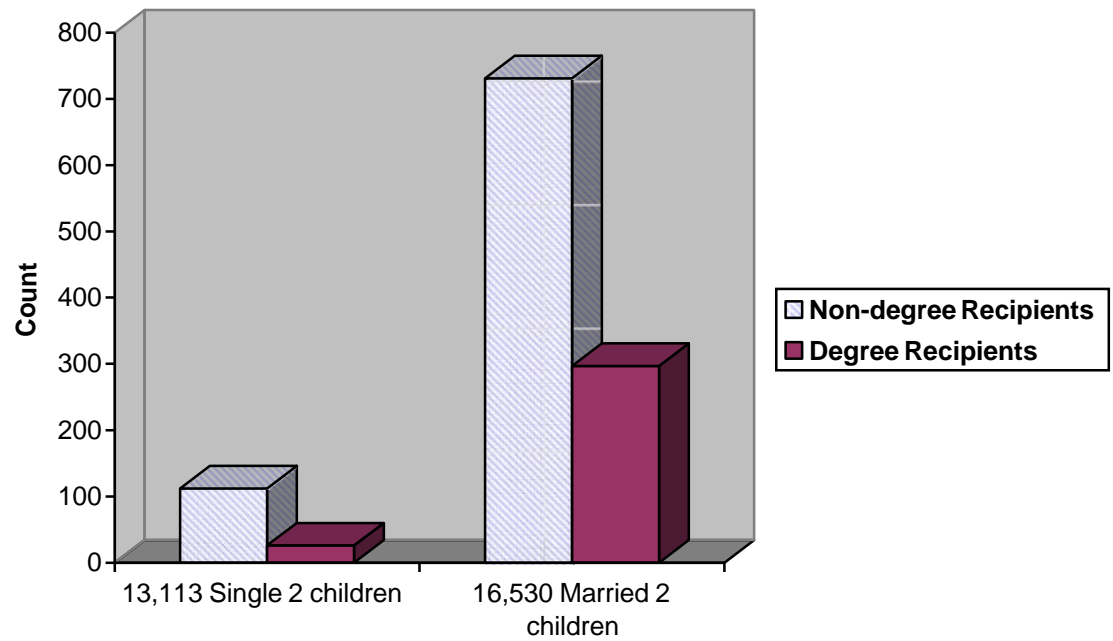


Figure 16. Bar Graph of Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients With Two Children

Table 33

Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients

(continued)

Poverty Threshold	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
\$16,588	Count	25	2	27
Single and	Expected Count	18.6	8.4	27.0
three children	% within POVERTY	92.6%	7.4%	100.0%
	% within ID	1.0%	.2%	.8%
	Residual	6.4	-6.4	
	Std. Residual	1.5	-2.2	
\$19,453	Count	115	19	134
Married and	Expected Count	92.1	41.9	134.0
three children	% within POVERTY	85.8%	14.2%	100.0%
	% within ID	4.7%	1.7%	3.8%
	Residual	22.9	-22.9	
	Std. Residual	2.4	-3.5	
Total	Count	2453	1116	3569
	Expected Count	2453.0	1116.0	3569
	% within POVERTY	68.7%	31.3%	100.0%
	% within ID	100.0%	100.0%	100.0%

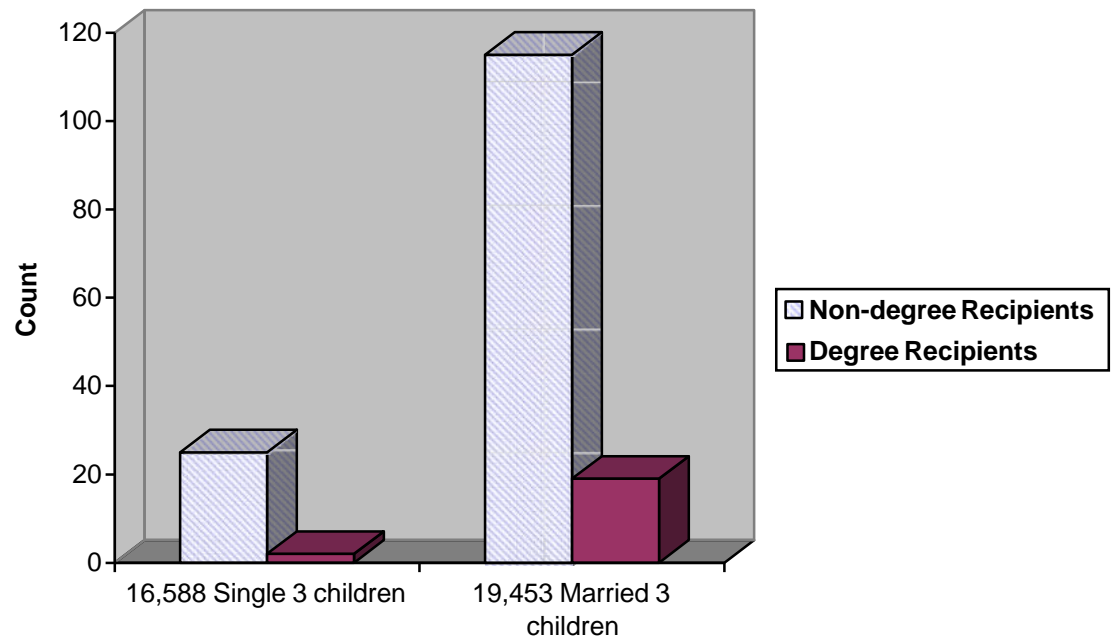


Figure 17. Bar Graph of Relationship for Poverty Threshold Between Non-degree Recipients and Degree Recipients With Three Children

Dependents

Tables 34 and 35 show cross tabulations of data for the number of dependents for degree recipients and non degree recipients. Figures 18 and 19 offer graphical interpretation of the data found in Tables 34 and 35. The students who received the associate degree with more than four dependents had an expected count of 10.9 and an actual count of 3. In the sample of students without the degree 24.1 were expected and there were actually 32. The Pearson chi-square test = 86.175, with $df = 4$, resulted in a significance level of .000. At $p = .000$, the number of dependents is statistically significant. The researcher can conclude there is a difference between the number of dependents for degree recipients and non-degree recipients.

Relationship for Dependents Between Non-degree Recipients and Degree Recipients

Dependents	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
0 dependents	Count	1389	801	2190
	Expected Count	1504.9	685.1	2190.0
	% within DEPENDENT	63.4%	36.6%	100.0%
	% within ID	55.7%	70.6%	60.4%
	Residual	-115.9	115.9	
	Std. Residual	-3.0	4.4	
1 dependent	Count	581	213	794
	Expected Count	545.6	248.4	794.0
	% within DEPENDENT	73.2%	26.8%	100.0%
	% within ID	23.3%	18.8%	21.9%
	Residual	35.4	-35.4	
	Std. Residual	1.5	-2.2	
2 dependents	Count	380	99	479
	Expected Count	329.1	149.9	479.0
	% within DEPENDENT	79.3%	20.7%	100.0%
	% within ID	15.2%	8.7%	13.2%
	Residual	50.9	-50.9	
	Std. Residual	2.8	-4.2	

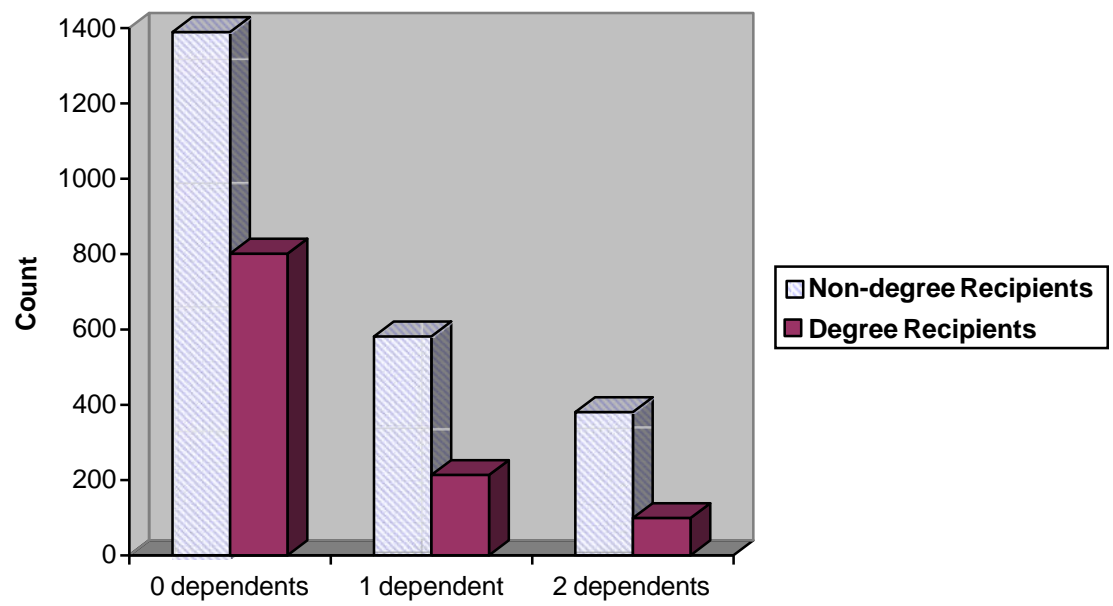


Figure 18. Relationship for 0 - 2 Dependents Between Non-degree Recipients and Degree Recipients

Table 35

Relationship for Dependents Between Non-degree Recipients and Degree Recipients (continued)

Dependents	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
3 dependents	Count	111	19	130
	Expected Count	89.3	40.7	130.0
	% within DEPENDENT	85.4%	14.6%	100.0%
	% within ID	4.5%	1.7%	3.6%
	Residual	21.7	-21.7	
	Std. Residual	2.3	-3.4	
4+ dependents	Count	32	3	35
	Expected Count	24.1	10.9	35.0
	% within DEPENDENT	91.4%	8.6%	100.0%
	% within ID	1.3%	.3%	1.0%
	Residual	7.9	-7.9	
	Std. Residual	1.6	-2.4	
Total	Count	2493	1135	3628
	Expected Count	2493.0	1135.0	3628.0
	% within DEPENDENT	68.7%	31.3%	100.0%
	% within ID	100.0%	100.0%	100.0%

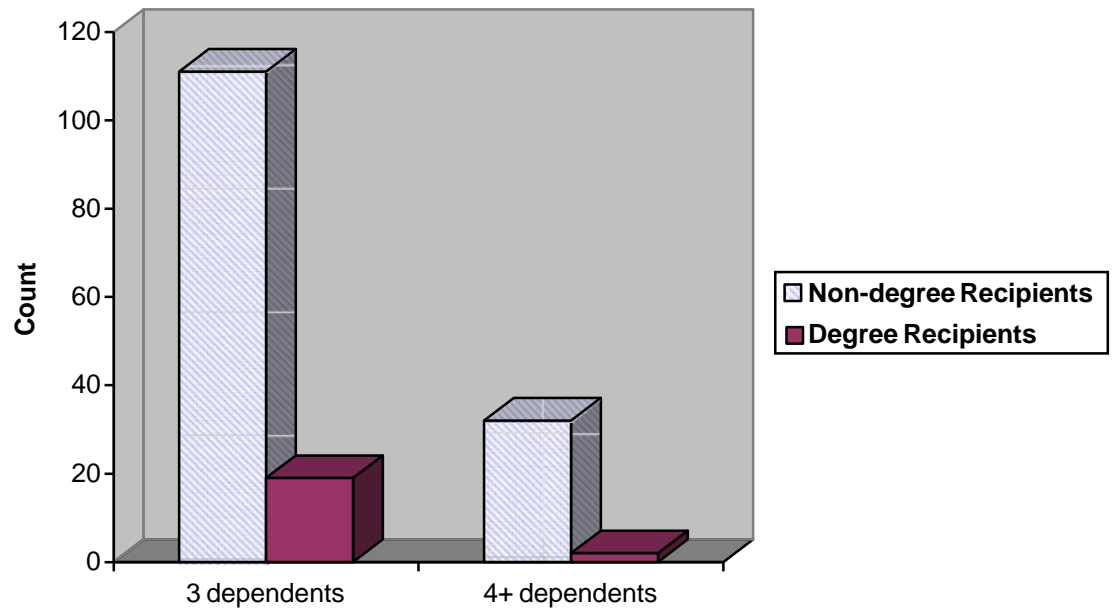


Figure 19. Bar Graph of Relationship for 3 - 4+ Dependents Between Non-degree Recipients and Degree Recipients

Single Parent

Table 36 displays a cross tabulation of data for the single parent status of degree recipients and non degree recipients. Figure 20 presents a graphical view of the data in Table 36. The percentage of students between both categories of the dichotomous dependent variable was distributed evenly. The students who received the associate degree represented 34% (66% not a single parent) of the population who where single parents while the students without the degree represented 32% (68% not a single parent). The Pearson chi-square test = .284, with $df = 1$, resulted in a significance level of .594. At $p = .594$, being a single parent is not statistically significant and the conclusion is to fail to reject the null hypothesis. The researcher can conclude there is no detectable difference between students who are or are not single parents.

Table 36

Relationship for Single Parent Status Between Non-degree Recipients and Degree Recipients

Single Parent	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
Yes	Count	348	101	449
	Expected Count	344.1	104.9	449.0
	% within SINGLE	77.5%	22.5%	100.0%
	% within ID	33.8%	32.2%	33.4%
	Residual	3.9	-3.9	
	Std. Residual	.2	-.4	
No	Count	682	213	895
	Expected Count	685.9	209.1	895.0
	% within SINGLE	76.2%	23.8%	100.0%
	% within ID	66.2%	67.8%	66.6%
	Residual	-3.9	3.9	
	Std. Residual	-.1	.3	
Total	Count	1030	314	1344
	Expected Count	1030.0	314.0	1344.0
	% within SINGLE	76.6%	23.4%	100.0%
	% within ID	100.0%	100.0%	100.0%

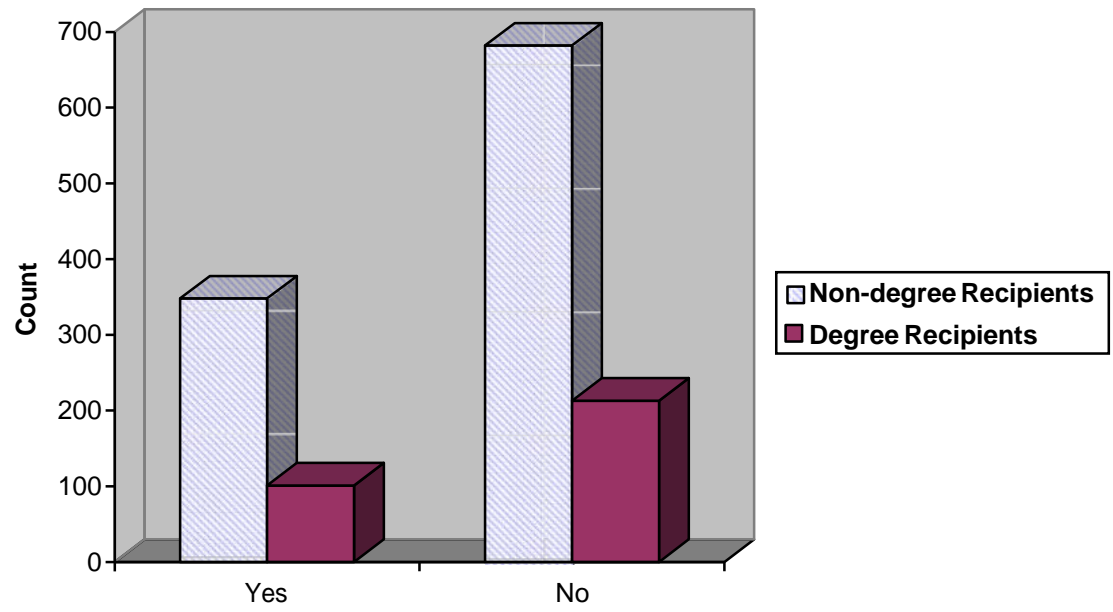


Figure 20. Bar Graph of Relationship for Single Parents Between Non-degree Recipients and Degree Recipients

Part-time employment

Table 37 displays a cross tabulation of data for part-time employment of degree recipients and non degree recipients. Figure 21 offers a graphical presentation of the data found in Table 37. The expected count for students who worked part-time and received the associate degree was 227 and the count for students without the degree was 408. The Pearson chi-square test = 7.202, with $df = 1$, resulted in a significance level of .007. At $p = .007$, part-time employment is statistically significant. The researcher can conclude there is a difference between the students who worked part-time and those who did not.

Table 37

Relationship for Working Part-time Between Non-degree Recipients and Degree Recipients

Part-time job	Crosstabulation	Non-degree Recipients	Degree Recipients	Total
No	Count	2038	886	2924
	Expected Count	2009.6	914.4	2924.0
	% within WORK PT	69.7%	30.3%	100.0%
	% within ID	83.3%	79.6%	82.2%
	Residual	28.4	-28.4	
	Std. Residual	.6	-.9	
Yes	Count	408	227	635
	Expected Count	436.4	198.6	635.0
	% within WORK PT	64.3%	35.7%	100.0%
	% within ID	16.7%	20.4%	17.8%
	Residual	-28.4	28.4	
	Std. Residual	-1.4	2.0	
Total	Count	2446	1113	3559
	Expected Count	2446.0	1113.0	3559.0
	% within WORK PT	68.7%	31.3%	100.0%
	% within ID	100.0%	100.0%	100.0%

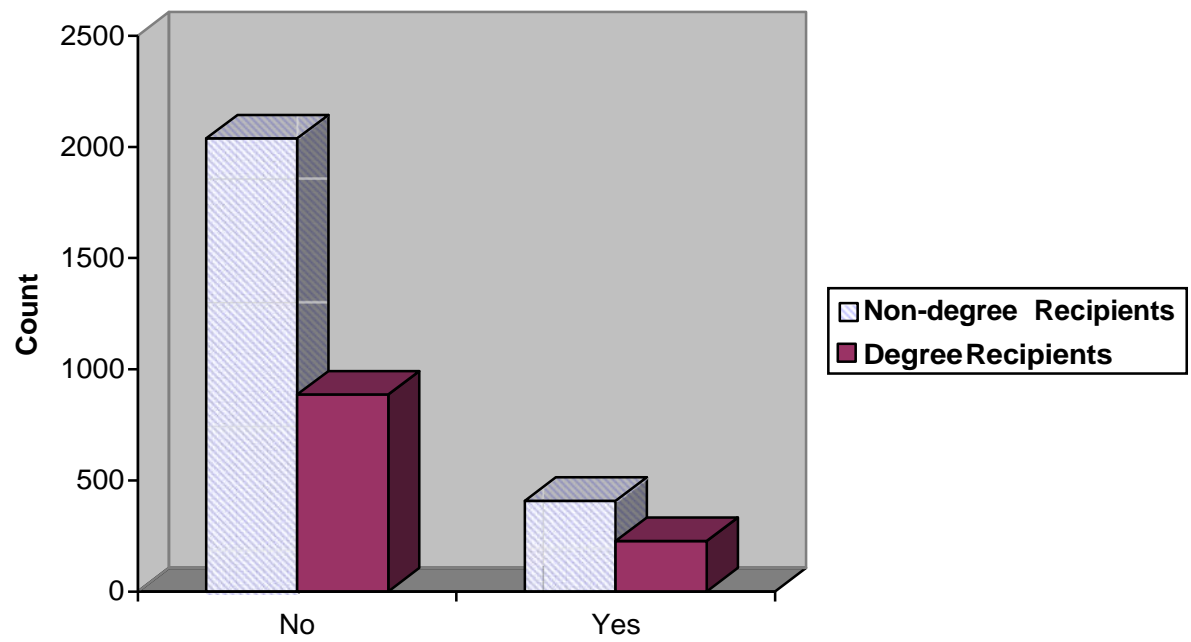


Figure 21. Bar Graph of Relationship for Working Part-time Between Non-degree Recipients and Degree Recipients

Logistic Regression Analysis

Logistic regression analysis was performed to build a model to predict the outcome of the dichotomous variable student success (Hosmer & Lemeshow, 2000). During the analysis only the significant categorical variables were retained and entered into SPSS using the default enter mode. Variables eliminated because of the lack of bivariate statistical significance with student success included: gender, single parent, and income. In the case of the poverty threshold and dependents variable, redundant information was reported. To eliminate the potential problem, the poverty threshold variable was eliminated and only the dependents variable utilized in the analysis. Seven variables were entered in the regression analysis including age, race, parents' education, delayed entry, part-time attendance, dependents, and work. All are categorical except for age and dependents. The reference categories for each of the categorical variables were the last or most populated category. For race, the reference category is White not Hispanic. For parents' education, the reference category is college education. For delayed entry, the reference category is no delay. For part-time attendance, the reference category is full-time attendance. For part-time work, the reference category is did not work.

In logistic regression the model with the predictor is compared to the baseline model (Hosmer & Lemeshow, 2000). For the purpose of this study, the researcher predicted into the category received the degree. The binary logistic regression results include seven output categories which are identified in Table 38. B is the unstandardized regression coefficient (Garson, 2006). Standard error (S.E) is the standard error for (B) (Garson, 2006). Wald statistics is an alternative test to chi square which is commonly used to test the significance of individual logistic regression coefficients for each independent variable (Garson, 2006, p.10). The degrees of freedom (dfs) represent how much data was used to calculate a specific statistic (Creswell, 2005). Significance (Sig) is when the observed scores exceed the predetermined alpha level (Creswell, 2005, p, 191). $\text{Exp}(B)$ is the SPSS output for odds ratio (OR). $\text{Exp}(B)$ "may be used as effect size measures and are the preferred effect size measure in logistic regression when comparing predictor variables" (Garson, 2006, p. 22). Confidence intervals (C.I.) estimate the

range of upper and lower statistical values that are consistent with observed data (Creswell, 2005, p. 193). The logistic regression output model includes the B , the standard error of B , the Wald statistic, the degrees of freedom, the significance level of the Wald, odds ratio or $\text{Exp}(B)$, and the confidence interval for $\text{Exp}(B)$ (Garson, 2006).

Table 38

Binary Logistic Regression Results

Variable	<i>B</i>	S.E.	Wald	df	Sig	Exp(<i>B</i>)	95% C.I. for EXP(<i>B</i>)	
							Upper	Lower
Age	.255	.082	9.764	1	.002	1.290	1.100	1.514
Race			15.639	5	.008			
American Indian or Alaska Native	-20.543	6955.069	.000	1	.998	.000	.000	
Asian or Pacific Islander	-.471	.226	4.345	1	.037	.625	.401	.972
Black not Hispanic	-.573	.163	12.413	1	.000	.564	.410	.776
More than one race	-20.068	4825.814	.000	1	.997	.000	.000	
Hispanic or Latino	-.018	.153	.014	1	.905	.982	.728	1.325
Parent Education			48.299	2	.000			
High school or less	-1.255	.201	38.970	1	.000	.285	.192	.423
Some college	-1.288	.187	47.639	1	.000	.276	.191	.398
Delay Entry	.818	.070	137.486	1	.000	2.266	1.976	2.598
PT Attendance	.859	.096	79.487	1	.000	2.362	1.955	2.853
Dependents	-.599	.059	104.430	1	.000	.549	.490	.616
Worked PT	-.086	.139	.382	1	.536	.918	.699	1.205

As age increases by one year there is a 1.3% chance of receiving the associate degree

Table 39

Binary Logistic Results for Age

Significance	Odds Ratio	Confidence Interval
.002	1.290	(1.100, 1.514)

Asian or Pacific Islanders are 38% (1-.625) less likely to get an associate degree than Whites. Blacks not Hispanics are 44% (1-.564) less likely to get an associate degree than Whites.

Table 40

Binary Logistic Results for Race

Race	Significance	Odds Ratio	Confidence Interval
Asian or Pacific Islander	.037	.625	(.401, .972)
Black not Hispanic	.000	.564	(.401, .776)

Participants' parents with the highest education level of high school or less were 72% less likely to earn an associate degree than participants' with parents who graduated from college or higher. Similarly participants' parents with some college were 72% less likely to earn an associate degree than participants with parents who graduated from college or higher.

Table 41

Binary Logistic Results for Parents' Education

Education Level	Significance	Odds Ratio	Confidence Interval
High School or Less	.000	.285	(.192, .423)
Some College	.000	.276	(.191, .398)

For every year participants delay entry to the 2-year public institution they are less than two times likely to obtain the associate degree.

Table 42

Binary Logistic Results for Delayed Entry

Significance	Odds Ratio	Confidence Interval
.000	2.266	(1.976, 2.598)

Participants who enrolled part-time were almost two and a half times more likely to receive the associate degree.

Table 43

Binary Logistic Results for Attended Part-time

Significance	Odds Ratio	Confidence Interval
.000	2.362	(1.955, 2.853)

Participants with dependents were 45% less likely to receive the associate degree.

Table 44

Binary Logistic Results for Dependents

Significance	Odds Ratio	Confidence Interval
.000	.549	(.490, .616)

Summary

The data analysis schema presents the research questions, hypotheses, independent and dependent variables, the statistical hypothesis, statistical procedures, and findings.

Table 45

Data Analysis Scheme

Research Question	Hypothesis	Independent Variables	Dependent Variables	Statistical Hypothesis	Statistical Procedures	Findings
1	--	--	--	--	Frequency distribution, Percentages, Cross tabulations	--
	1	F2BIRTHY	F4ELSECT, F4EDGR12	Ho ₁ =0 Ha ₁ ≠0	PCS,BLR	Age, significant Significant correlation
	2	F4SEX	F4ELSECT, F4EDGR12	Ho ₂ =0 Ha ₂ ≠0	PCS,BLR	Gender, not significant No correlation
	3	F4RACEM	F4ELSECT, F4EDGR12	Ho ₃ =0 Ha ₃ ≠0	PCS,BLR	Race, significant Significant correlation
	4	F4HI99	F4ELSECT, F4EDGR12	Ho ₄ =0 Ha ₄ ≠0	PCS,BLR	Income, not significant No correlation Parents
	5	F2PARED	F4ELSECT, F4EDGR12	Ho ₅ =0 Ha ₅ ≠0	PCS,BLR	education, significant Significant correlation
	6	F4EFMY, YRREC F4EPARTT F4HPOVTH F4GNDP, F4SGPAR F4A12KP	F4ELSECT, F4EDGR12	Ho ₆ =0 Ha ₆ ≠0	PCS,BLR	3 of 6 risk factors, significant Significant correlation for delayed enrollment, part- time enrollment, dependents

Note. Pearson Chi-square (PCS), Binary Logistic Regression (BLR)

CHAPTER 5

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

This chapter summarizes the findings discussed in Chapter 4 and is organized to provide discussion on the significant variables in the study, conclusions, the effects of the conceptual framework on the findings, implications, recommendations, and a summary.

Summary of Findings

This longitudinal study allowed the researcher to analyze the data on three different levels. Each level of analysis permitted the researcher to complete a more in depth evaluation of the data. Data were analyzed using descriptive statistics, bivariate relationships, and binary logistic regression. The descriptive statistics were reported from the participant responses and the percentage of the total response. The bivariate relationships measured the relationship between the expected and observed counts of the dichotomous dependent variable. Prior to entering the significant categorical variables in the binary logistic regression analysis, the Pearson chi-square test was used to determine which predictor variables should be entered in the binary logistic regression model. From the original eleven independent variables, seven independent variables (age, race, parents' education, delayed enrollment, part-time enrollment, dependents, and worked part-time) were entered in the regression model. Correlation coefficients were computed between each statistically significant independent variable in the binary logistic regression analysis and degree completion was used to determine whether the significance was confined to the control group or was an overall level of significance.

To frame the conclusion, the conceptual framework Astin's Input-Environment-Outcome (I-E-O) model was used. The independent variables are identified as input variables, the dichotomous dependent variable is identified as the output variable, and the community college is the environment. The distinguishing characteristics of successful community college students were found in the student characteristics age, race, and parents' education. The distinguishing characteristics of risk factors were found in delayed enrollment, part-time enrollment, and dependents.

Age was found to positively contribute to the chance of receiving the associate degree.

Age was found to be a statistically significant predictor of student success at $p = .000$. The $\text{Exp}(B)$ 1.290 for age indicated a positive relationship between age and receiving the associate degree. As age increased by one year, there was a 1.3% chance of receiving the associate degree. This supports the research which determined the community college population was older than 24 (Cohen & Brawer, 2003), and the average age of the community college student is 29 (AACC, 2008).

Conversely, race was found to negatively contribute to the chance of receiving the associate degree if the participant was Asian or Pacific Islander or Black not Hispanic. Race was found to be a statistically significant predictor of student success at $p = .009$. The bivariate logistic regression model proved specifically that Asian or Pacific Islander (38%) and Blacks not Hispanics (44%) were less likely to receive an associate degree than Whites. There was no significance for American Indian or Alaska native, more than one race or Hispanic participants. This provides support for the research that demonstrates racially and ethnically underrepresented students have lower graduation and persistence rates (Bailey et al., 2005b; Farley, 2002).

Parents' education was found to contribute both negatively and positively to the chance of receiving the associate degree. Parents' education was found to be a statistically significant predictor of student success at $p = .001$. The bivariate logistic regression model proved specifically that participants parents' with an education level of high school or less were 72% less likely to earn an associate degree than participants whose parents' graduated from college or higher. Similarly participants parents' with some college were 72% less likely to earn an associate degree than participants with parents' who graduated from college or higher. This negative impact is supported by Pascarella et al. (2004) who identified barriers that impact first generation college students. Unexpectedly, participants whose parents had some college also had a negative impact on earning the associate degree. First generation students are also less likely to experience the levels of support other families provide for their student (McLain, 2008). The binary logistic regression model allowed the researcher to compare each of these negative effects to

participants whose parents graduated from college with a bachelor degree or higher who had a positive impact on receiving the associate degree.

Risk factors had two distinguishing characteristics with a negative impact on the completion of the associate degree (delayed entry, dependents) and one with a positive outcome (part-time enrollment) for the receipt of the associate degree. Risk factors have been identified in the literature to adversely affect student success (McSwain & Davis, 2007; Sirin ,2005; Cook & King, 2004).

Based on the findings from the binary logistic regression analysis the researcher concluded the relationship between the independent variables and the dichotomous dependent variable served as a predictor of who received or did not receive the associate degree. Specifically, the predictors for participants who would earn the associate degree consisted of a non-traditional aged student, who is White, with a parent who graduated from college or higher, had a minimal delay in entry into the community college, was enrolled part-time, and did not have dependents.

The most surprising findings from the research were the negative impact the parents' highest education level had on the student receiving the associate degree, the positive impact part-time enrollment had on receiving the associate degree, and how the plethora of programs offered by the community college are not enough to guarantee student success. The literature supports the first generation college students are older, struggle with developmental education, take classes part-time, work full-time and lack parental support (US Department of Education, 2001b; Pascarella et.al., 2004; US Department of Education, 2005a). In the area of part-time enrollment the literature identifies struggles with retention and student persistence. Tinto (1993, 2001) suggested the more frequently students engage with faculty, staff, and their peers the more likely they are to persist. Part-time enrollment limits the timeframe for this type of interaction. Finally, with all the programs available at the community college the findings support the contention that the community college needs to do more (Bailey & Karp, 2003; Kuh et al., 2005; US Department of Education, 2008c).

Descriptive Statistics

The initial eleven variables and the four additional variables were included in the descriptive analysis. The analysis of the descriptive data identified there were no differences in the age, total family income or poverty threshold, working full-time or part-time between degree recipients and non-degree recipients. Females received their degrees at a higher rate than males but they are also better represented. The descriptive data also identified that fewer minorities completed the degree. Parents' education experiences influenced the decisions of the students attending the community college. The data show that more non-degree recipients attended college full-time and had delayed enrollment. The descriptive data on dependents supported the data on single parents which confirmed students with dependents have a lower chance of receiving the degree.

The data from the additional variables did not reveal a difference between degree recipients and non-degree recipients who enrolled in remedial math and remedial English courses. Boylan (2002) made the point that developmental courses help the underprepared student prepare for their academic goals. Additionally the largest response to the reason why the degree recipients and non-degree recipients enrolled in the community college was to obtain a degree or certificate. Being an open access college is dependent on remedial education and increasing the skills of the underprepared student to succeed in college courses (McCabe, 2000). Whether students received a degree or not most worked for pay while studying. This finding is supported by Matus-Grossman and Gooden (2002) who found students still juggled work and college attendance which sometimes became a greater burden than paying tuition. Finally, respondents who did not receive the associate degree left for a variety of reasons which included financial issues, a job or the military, and marriage or death. Adelman (2007) suggested the community college has a participation problem not an access problem.

Bivariate Relationships

The bivariate cross tabulations for the eleven independent variables were compared between both categories of the dichotomous variable student success. The eleven variables were

entered into SPSS to identify the statistical significance of each variable and ultimately eliminate variables that could not be entered in the regression model. Eight variables were found to be statistically significant (age, race, parents' education, delayed enrollment, part-time enrollment, poverty threshold and dependents). Three variables were found to not be statistically significant (gender, income, single parent). The outcome for the bivariate relationships for the independent variables did not differ from the descriptive statistics.

Binary Logistic Regression

During the analysis only the significant categorical variables were retained and entered into SPSS. Variables eliminated because of the lack of bivariate statistical significance left the researcher with seven independent variables. The seven variables entered in the regression analysis included age, race, parents' education, delayed entry, part-time enrollment, dependents and part-time employment. Results revealed a positive relationship between degree completion and two variables: age, and part-time enrollment and a negative relationship among three variables: Asian or Pacific Islanders, Black not Hispanics, and White not Hispanic; parents' education for parents with the highest level of education being high school or less as well as parents with some college; delayed entry; and participants with dependents.

In the Pearson chi-square test age ($p = .000$), race ($p = .009$), parents' education ($p = .001$), delayed enrollment ($p = .000$), part-time enrollment ($p = .000$), having dependents other than spouse ($p = .000$), working part-time while enrolled ($p = .007$), and the poverty threshold ($p = .000$) were statistically significant. Gender ($p = .316$), single parent status ($p = .594$), and income ($p = .744$) were found to not be statistically significant. The researcher found the data from poverty threshold and dependents provided redundant information on the amount of dependents the participant supported. To eliminate the conflict the poverty threshold was eliminated and data from the dependent variable was utilized in the binary logistic regression analysis.

Influence of the Conceptual Framework

Astin's Input-Environment-Outcome (I-E-O) model addresses the complexities of research in higher education by highlighting the interdependence between inputs, environments,

and outputs: “Inputs refer to the characteristics of the student at the time of initial entry to the institution; environment refers to the various programs, policies, faculty, peers, and educational experiences to which the student is exposed; and outcomes refer to the student’s characteristics after exposure to the environment” (Astin, 1993, p. 7). The role and influence of the community college becomes the environment where the exposure takes place and changes are identified and explained. Astin’s (1993) original purpose for the model was to assess the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions. Furthermore, Astin (1993) emphasized that natural experiments allow the researcher to examine multiple effects simultaneously. The I-E-O model allowed this researcher to examine student success looking at inputs (age, gender, race or ethnicity, income, parent education) and risk factors (delayed enrollment, part-time enrollment, financial independence, dependents, single parent status, working part-time) that influence students, the environment (community college) wherein the influence occurs, and the outputs (degree or non-degree recipients).

Astin’s I-E-O model influenced this study by allowing the researcher to look into the institution to see if the environment supported the input and provided an output of student success. The significance of age, race, and parents’ education each impact how the community college will handle the student who enters the college between ages of 25 and 28, falls into the minority category of Black not Hispanic and Asian or Pacific Islander, and whose parent’s only completed high school or less and the students whose parents’ completed some college. Involvement at the community college may look different for students who fall into either of these categories. According to the findings in this study, the college experience will be positive, yielding a degree, for the White not Hispanic student, the older student, and the student whose parents graduated from college (or higher). These findings leave gender and income as inputs that will not significantly affect the degree recipient.

The environment of the community college includes programs, policies, faculty, peers, and the educational experiences. The environment influenced the findings by allowing the

researcher to identify implications from practices to policy. These implications include how the community college should adjust their focus, examine resources, encourage engagement between faculty and students, encourage peer to peer interaction, incorporate planning, consider the whole student, foster teaching and learning, and set success as an obtainable goal. Ultimately, the output of student success will be influenced by strategic operations on the part of everyone influencing the environment (Braxton, 2006).

As the community college recognizes the needs of the total student population and the student recognizes their part in the learning process risk factors could begin to dissipate and student characteristics could be addressed in a more uniformed approach. Although research supports academic preparation being one of the most significant predictor of college success (Martinez & Klopott, 2005; Adelman, 2006) student success strategies should be established and supported for all students (O'Banion, 1997; McCabe, 2000; McClenney, 2004; McPhail, 2005). Servicing the whole student helps to develop the whole person and enhances the academic mission of the institution (Harvey-Smith, 2005).

Implications from Practices to Policy

Based on the findings of this study, the community college is exhorted to strengthen its focus on practices and policy which benefit traditional aged students who are from a minority group, who are the first in the family to attend college, and who are students whose parents' have some college or high school only, who delays their entry into college, who enrolls full-time, and who has dependents. The traditional programs and practices can be enhanced and available to larger populations (Cohen & Brawer, 2003; McClenney, 2004; Braxton, 2006). Examples of tradition programs found in the community college are highlighted and illustrations of how the program could work are presented below:

The community colleges know their students are likely to arrive academically underprepared, attend college part-time, have a job, have family obligation and challenged by financial obstacles, however, practices and policies do not always consider the students' challenges (Berger & Braxton, 1998; Braxton, Brier, & Steele, 2007). Students with four or more

nontraditional characteristics are the ones usually enrolled in the community college (US Department of Education, 2002c). The nontraditional characteristics include being single, having dependents, delayed enrollment, part-time enrollment, financial independence, and working part-time.

Mentor Programs

Mentors connect students with staff or faculty who will take responsibility for students' successes early in the admission process and continuing through the students' matriculation. Mentoring programs would be a significant way to foster student success. Successful mentoring practices have been implemented at many community colleges. Students at Northwest Vista College are required to take the Student Success Seminar (CCSSE, 2008). This practice supports Tinto's (1987) theory that departure from college results from the inability for the student and institution to establish or create a sense of belonging. Retention of the student can be supported by the connection of student to success practices identified in student success seminars. Adapting these practices into the community college may further the commitment to learning and engage the student at the time of admission. Using faculty as mentors may also help to engage the faculty in other aspects of the students' educational experience.

Students at Santa Fe Community College have used student run clubs and organizations to engage the student population (CCSSE, 2008). Clubs and organizations provide students with a structure for peer to peer engagement. This type of engagement was identified as a significant factor for active and collaborative learning (CCSSE, 2006b). Students have been identified as learning more when they are actively involved in their education and had opportunities to think about and apply what they learned in different settings (CCSSE, 2006b). Additionally, colleges committed to students' success tend to cultivate positive working and social relationships among different groups on campus. Another application of mentors involves the use of student ambassadors at Cuyahoga Community College (CCSSE, 2008). Student ambassadors serve as mentors for new students. With the assistance of the ambassador new students learn more about

resources and navigating the campus. This type of interaction between students has increased retention rates among students.

Engagement or involvement has been identified by Astin (1977, 1985, 1993), Braxton, Brier, and Steele (2007), Pascarella and Terenzini (2005), Nippert (2000) as ways to foster a culture of student success and methods to reduce student departure. Additionally, if faculty and administrators use good practices to create college experiences students would put forth more effort (Kuh, Kinzie, Schuh, & Whitt, 2005). As stated by Harvey-Smith (2005), “there must be a commitment to the development of the whole person and enhancement of the academic mission” (p. 90). Mentoring would play an intricate role in engaging, involving, or guiding the student to practices, programs, initiatives and services that direct students toward success and create an infrastructure to support the student until they receive the associate degree and beyond.

Academic Plans

Academic plans clearly define how to reach educational goals for a community college student who is likely to be a first generation college student. Acknowledging that attending college is just one of many items on the students’ agenda will help the student plan, direct, and reach their education goals. Santa Fe Community College, Durham Technical Community College, and Houston Community College each found ways to apply academic plans in their practices CCSSE, 2008). Adelman (2005) found that students’ long-term educational expectations are also correlated with their educational attainment. Students with modest goals tended to pursue less education, to persist less, and to earn fewer degrees. The use of academic plans would potentially allow students to see each step of the way and allow them to make modifications to their expectations as needed.

Academic plans were implemented at Santa Fe Community College when the president began attending each commencement ceremony of the local high schools. During the visit each graduating student received an acceptance letter to Santa Fe Community College. The letter congratulates them and provides the next steps for enrolling at the college. It also explains the scholarship is only available to students the semester after graduating from high school. This

practice emphasizes it is never too early to begin planning. At Durham Technical Community College students were made aware of the college's pre-enrollment orientation. They were able to increase participation by 350% with student indicating that they had learned skills necessary to get a good start in college. Houston Community College was able to require students to explore careers, learn about academic programs, declare and major and file a degree plan through the student success course. During this application of the education plans Hispanic and African-American students increased the persistence rate significantly from fall to spring and then fall to fall.

Bailey et al. (2005) identified student expectations as a characteristic that can be taken into account when examining student outcomes and college success. Students' goals are well suited as the foundation for the development of educational plans. The use of the goals with course sequences and support services must be considered by all education professional interacting with the student (Bailey et al., 2005). Although these goals are likely to change over the course of the college experience counseling, career planning, and relevant pedagogy seem to be necessary to cultivate confidence and impact student goals. These goals may aid in formulating meaningful plans to support alliance programs being created with 4-year institutions for seamless transfer opportunities. Ultimately, educational plans will assist in navigating low to mediocre range expectations to a higher range in which students may fully engage as active participants in the learning process.

Proper Placement for Underprepared Students

Proper placement in developmental courses and transition to college level courses would help the students who are underprepared for college level courses and enrolled at the community college. This will involve new approaches and use of the placement test results in a systematic method. McCabe (2000) identified the quality of the open access college is dependent on remedial education and increasing the skills of the underprepared student. In addition Leinbach and Jenkins (2008) stress that students enrolled in remedial courses may have goals to obtain a degree.

Broward Community College, College of the Marshall Islands, and Phillips Community College of the University of Arkansas found models to incorporate college readiness as a way to improve outcomes for students needing developmental education (CCSSE, 2008). At Broward the case management model improved outcomes for the developmental students. The case management model includes theme based learning communities, student life skill courses, college prep classes, and general education courses. The case management model includes a holistic approach to intensive advising. The application of these learning communities encourages academic success (Price, 2005). The Washington Center (2003) found learning communities create an environment where students become more intellectually mature and responsible for their learning and development.

First-year college experience programs were designed to foster integration into college which will lead to student success (Noble, Flynn, Lee, & Hilton, 2007). The College of the Marshall Islands implemented a first-year program to better serve the population of students requiring developmental education. After the first-year experience program was implemented, developmental student retention increased by 10%. The results at Marshall Islands supports the principles identified by Upcraft et al. (2005) based on the framework or foundation of commitment, focus, partnership, balance, standards, dignity, respect, and responsibility. This framework places student learning as the highest priority of student attainment.

Phillips Community College decided to deliver instruction for the three levels of developmental math in an interactive format. The modules created a quick, incremental approach to learning which allowed students to complete three levels of developmental math within one semester. Although students participating in the interactive format experienced better performance there were less students completing the course in one semester. Evaluation of the format indicated that the students needed more time on task which lead to increase time in the math lab.

Active and Collaborative Learning

Active and collaborative learning was identified as an effective way to engage students but is thought to be difficult to accomplish when students are enrolled part-time, trying to find a balance among studies, work, and family. The community college is asked to find a way to keep students on campus. Examples of engaging students in campus activity include cohorts, athletics, and social outlets. Studies by CCSSE (2006b) found active learning techniques challenged intellectual and creative work that was central to student learning and collegiate quality. The skills encouraged the use of structured exercises, challenging discussions, team projects and peer critiques which support processes that lead to student success.

Examples of successful implementation of active and collaborative learning practices were established at Prairie State College, Lane College, and LaGuardia Community College, (CCSSE, 2008). At Prairie African American male faculty spent time together immersed in literature on practices that foster success for African American males. The four faculty members used the information to teach a college success seminar based on their research. The seminar helped to support other programs on campus that focused on African American male students. The focus on success strategies for a specific population supports theory behind learning communities.

Lane College implemented active and collaborative learning through learning communities. Learning communities were initiated for first-year college students which linked effective learning with a college success course. Eventually the learning communities expanded to include three levels of writing classes with plans to incorporate math. Faculty at Lane College found student who participated were more engaged with their studies, instructors, fellow students, and the college. The approach LaGuardia instituted involved placement of all incoming students into one of three academies. The school within a school approach provided themed basic skills courses linked with discipline area courses. This approach was able to increase the retention rate 6% higher than non participants.

Additional Common Support Programs

Other practices would incorporate programs or performance indicators that support traditional aged students, minorities, first generation college students, student who delayed entry to the community college, enrolled full-time and had dependents. Programs such as the Federal TRIO Programs have successfully transitions students from high school into college using performance indicators and benchmarks. Institutionalizing the practices of these programs would provide community colleges with rich data and benchmarks to identify best practices for student success. The Federal TRIO Programs provide educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. The progressive history of TRIO includes the development of six programs. Upward Bound, the oldest program, provides fundamental support to participants in their preparation for college entrance. With Talent Search, a program was designed to increase the number of youths from disadvantaged backgrounds who complete high school and enroll in postsecondary education institutions of their choice. Student Support Services was created as an additional educational opportunity program, with the mission to increase the college retention and graduation rates of its participants and to help students make the transition from one level of higher education to the next (US Department of Education, 2008c).

Some TRIO programs targeted students beyond the traditional college transition age. Another program, the Educational Opportunity Centers, was created to fulfill the goal of increasing the number of adult participants who enroll in postsecondary education institutions. Finally, the Training Program for Federal TRIO Programs and the Ronald E. McNair Postbaccalaureate Achievement Program are additional targeted programs. The McNair program prepares participants for doctoral studies, and the Training Program provides funding to improve the skills and expertise of the directors and staff in the TRIO programs (US Department of Education, 2008c).

Achieving the Dream has helped community colleges foster student success. This initiative was created to help more community college students succeed by using data to improve

student outcomes (Achieving the Dream, 2006). Participants have agreed to use data to drive strategies; monitor progress; evaluate outcomes; involve faculty, students, staff, and communities in their efforts; advocate for state and national policy changes as needed (Achieving the Dream, 2007).

Finally, policy to support President Obama's education agenda would involve creating and marketing programs that would fulfill the plan to allow all students who graduate from high school and attend at least one year of job training or higher education to better equip the workforce in the 21st century economy. As he continues to make higher education more affordable by expanding Pell Grants and initiating new tax credits he wants to ensure any young person who works hard and desires a college education can access it. With this thought in mind the community college should continue to provide short term skills training through partnerships and training programs. Currently the community college plays a critical role in the preparation of professionals such as nurses, allied health professionals, law enforcement officers, firefighters, emergency medical technician and others who are typically first on the scene of trauma or disaster.

Recommendations for Future Research

Recommendations for future research include discussion specific to the use of NELS:88 data to determine predictors of academic student success for the Black not Hispanic population of students. This population was identified, by the research, to have a higher percentage of students who are not awarded the associate degree when compared to White students. This analysis could be significant to the community college based on the fact that the community college serves 13% African American students (AACC, 2008). Being able to identify predictors that would help close the achievement gap would provide inestimable resources for institutions serving African Americans and no doubt for other minority students as well. Researchers would be able to use this data to support the request for resources to implement programs to enhance student success for minority students.

A second recommendation involves finding relationships between the community college experience and the 4-year public institution experience. Determining factors that contribute to the success or lack of success for the community college student who transfers to the 4-year public institution would add to the literature. Looking for relationships between predictors at the 2-year public institution and the 4-year public institution would also provide a deeper analysis of the data. Researchers would use these findings to inform the 4-year public institution of challenges associated with the predictors of student success. In response, the 4-year public institutions have baseline data to guide their decisions to implement or strengthen support programs and services.

The third recommendation would be to replicate the NELS:88 study every 10 – 15 years. Creating a new cohort for this longitudinal study will continue to provide rich data that can be compared to previous studies and set benchmarks for future studies. Researchers would be able to identify trends based on generational differences and how these differences impact student success.

Finally, this quantitative study would be enhanced if a qualitative component were added to include an urban, suburban, and rural community college. Identifying focus groups in urban, suburban, and rural community colleges would allow the study to explore behavioral and institutional characteristics of current students in each category. Finding relationships between the longitudinal data and the behavioral characteristics for the participants would add another dimension to the study.

Summary

Like a quilt, many of the programs, practices, and policies in the community college are patched together without a pattern or plan. Attention to the needs of students who do not fit the profile of a successful student is expected as a goal for the community college to fulfill. Students with dependents need daycare. Students who enroll full-time need support and services. Students who delay entry to the community college need time management skills, planning strategies, and competence in the area of goal prioritization. Students who are the first to attend college need support services, academic and career planning skills. The minority student needs

to be able to navigate the education system as well as the job market. The traditional aged student needs the social and educational experience of being in college.

As the community college recognizes the needs of the non-degree recipient it is asked to find ways to incorporate daycare services for students with children and elderly care for students with aging parents or grandparents. The availability of financial planning, health insurance, family planning, nutrition, and healthy living would remove some of the effort required for students to know how to juggle home and education. Students who live within the poverty threshold may need programs such as Welfare to Work, Co-op programs, or Service Learning. These resources are not always considered by community college students. Corporate partnerships may be necessary to bridge training with the workforce needs. Additionally, middle school and elementary school programs may be critical as community college partners, providing early intervention for students who do not have college completers in the home and who are less likely to receive guidance needed to prepare them for high school, college, and beyond.

The community college is urged to take a look at the academic structure of the institution. For profit institutions have entered the field of education offering shorter time frames for traditional courses. Are the Carnegie units and seat time a significant factor in the 21st century? The Carnegie unit was developed in 1906 as a measure of the amount of time a student had studied a subject. In some states it is used as a method to award credit for classes and defines a semester unit of credit as equal to three hours of work per week for a semester. Perhaps the use of outcome assessments is the answer to showing how students learn what the instructor is teaching. Grades provide individual performance measures but how is the advancement of the curriculum measured? Accreditation agencies have identified outcome assessments or institutional effectiveness as a method to measure what has not been encompassed in the unit or seat time. The shift from the measurement of student progress from seat time and credits to what students are expected to learn will permeate multiple levels of learning.

In the review of *Double Vision: A University for the 21st Century* by James Duderstadt, Keller (2000) reported the community college was uniquely positioned while the university had to

address humanistic, technological, and vocational concerns. This article on 21st century transformation identified a strong need to change the traditional education system. Asking the question: Does the original college commitment to liberal arts and general education still have a place in the community college? Some community college researchers and administrators feel, if the community college eliminated its focus on liberal arts and concentrated on workforce development programs, supported by the Tech Prep initiative in the high school, it could feed into the workforce quicker, thus supporting President Obama's plan to lead the world in college degrees by 2020. "We believe it's time to reform our community colleges so that they provide Americans of all ages a chance to learn the skills and knowledge necessary to compete for the jobs of the future. Our community colleges can serve as 21st century job training centers, working with local businesses to help workers learn the skills they need to fill the jobs of the future" (Obama, 2009, p. 2).

The researcher believes with all the programs, policies, and support the community college has received since its inception, there is still a need to do more. Institutionalizing programs such as the models introduced by TRIO and Achieving the Dream would provide students with additional resources, administrations basing decisions on facts, and additional support which fosters success and fortifies student goals. The community college should also recognize that challenges in the economy will bring a younger student who should not be overlooked based on the focus given to the older student. If the community college is not going to consider enhancing traditional education formats and embracing the needs of the workforce, community college leadership should reconsider the philosophy of the founders of the community college and revert to being the 13th year of high school.

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APPENDIX A

National Education Longitudinal Study

Fourth Follow-up: 1988-2000

CATI/CAPI Facsimile Instrument
November 14, 2000

F4AACTF

First, I would like to ask you some questions
about your current activities. Are you currently...

1 = YES or 2 = NO FOR EACH.

Working for pay at a full-time job.....F4AACTF

[if F4AACTF eq <1>]

Are you also working for pay at a part-time job.....

[endif]

[if F4AACTF eq <2> or F4AACTF eq <-1> or F4AACTF eq <-2>]

Are you working for pay at a part-time job.....

[endif]

(F4AACTP)

[if F4AACTP eq <1> or F4AACTP eq <2> or F4AACTP eq <-1>
or F4AACTP eq <-2>]

Taking vocational or technical courses at any
school or college..... (F4AACTV)

[endif]

[if F4AACTV eq <1> or F4AACTV eq <2> or F4AACTV eq <-1>
or F4AACTV eq <-2>]

Taking academic courses at a two- or four-year college, including
graduate or professional schools.....(F4AACTG)

[endif]

[if F4AACTG eq <1> or F4AACTG eq <2> or F4AACTG eq <-1>
or F4AACTG eq <-2>]

Serving in another work experience, such as an apprenticeship,
training program, or internship.....(F4AACTW)

[endif]

[if F4AACTW eq <1> or F4AACTW eq <2> or F4AACTW eq <-1>
or F4AACTW eq <-2>]

[if F4AACTF ne <1> and F4AACTP ne <1>]

Keeping house full-time (homemaker).....(F4AACTH)

[endif]

[endif]

[if F4AACTW eq <1> or F4AACTW eq <2> or F4AACTW eq <-1>
or F4AACTW eq <-2>]

[if F4AACTF ne <1>]

Holding a job but temporarily on leave or waiting
to report to work... (F4AACTL)

[endif]

[endif]

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELs:88/2000 Full Scale CATI/CAPI

F4AACTP

Current activity-part-time job

See F4AACTF for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELs:88/2000 Full Scale CATI/CAPI

F4AACTV

Current activity-voc/tech school

See F4AACTF for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

Current activity-academic school

See F4AACTF for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AACTW

Current activity-work experiences

See F4AACTF for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AACTH

Current activity-keeping house

See F4AACTF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents not employed.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AACTL

Current activity-on leave/awaiting job

See F4AACTF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents not employed full-time.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AACTD

Were your work and school activities during
the last week in January, 2000, the same as
they are now?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4A12KF

During the last week in January, were you...

1 = YES or 2 = NO FOR EACH.

Working for pay at a full-time job.....F4A12KF

[if F4A12KF eq <1>]

Were you also working for pay at a part-time job.....

[endif]

[if F4A12KF eq <2> or F4A12KF eq <-1> or F4A12KF eq <-2>]

Were you working for pay at a part-time job.....

[endif]

(F4A12KP)

[if F4A12KP eq <1> or F4A12KP eq <2> or F4A12KP eq <-1>
or F4A12KP eq <-2>]

Taking vocational or technical courses at any
school or college..... (F4A12KV)

[endif]

[if F4A12KV eq <1> or F4A12KV eq <2> or F4A12KV eq <-1>
or F4A12KV eq <-2>]

Taking academic courses at a two- or four-year college, including graduate or professional schools.....(F4A12KG)

[endif]

[if F4A12KG eq <1> or F4A12KG eq <2> or F4A12KG eq <-1> or F4A12KG eq <-2>]

Serving in another work experience, such as an apprenticeship, training program or internship.....(F4A12KW)

[endif]

[if F4A12KW eq <1> or F4A12KW eq <2> or F4A12KW eq <-1> or F4A12KW eq <-2>]

[if F4A12KF ne <1> and F4A12KP ne <1>]

Keeping house full-time (homemaker).....(F4A12KH)

[endif]

[endif]

[if F4A12KW eq <1> or F4A12KW eq <2> or F4A12KW eq <-1> or F4A12KW eq <-2>]

[if F4A12KF ne <1>]

Holding a job but temporarily on leave or waiting to report to work... (F4A12KL)

[endif]

[endif]

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4A12KP

January 2000 activity-part-time job

See F4A12KF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4A12KV

January 2000 activity-voc/tech school

See F4A12KF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4A12KG

January 2000 activity-academic school

See F4A12KF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4A12KW

January 2000 activity-work experiences

See F4A12KF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4A12KH

January 2000 activity-keeping house

See F4A12KF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities and not employed in January 2000.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4A12KL

January 2000 activity-on leave/await job

See F4A12KF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents interviewed after January 31, 2000 with current activities different from January activities and not employed full-time in January 2000.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AEMPL

Employed for pay

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AAFTN

Have you ever served on active duty in the armed forces?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AAFNW

Are you currently serving on active duty (in the armed forces)?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents currently employed who have served on active duty.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AWNTJ

[if F4AEMPL gt <1>]

You said before that you are not working for pay.

[endif]

Do you want a full- or part-time job for pay at this time?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents not employed.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4AFNDW

Have you done anything to find work during the last 4 weeks?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents not employed who want job.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BEVEM

[if F4AEMPL eq <2>]

You mentioned before that you are not currently working for pay at either a full-time or a part-time job.

[endif]

Since high school, have you ever held a job for pay?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents not currently employed with no preloaded record of employment.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BJST

End date of last job for pay

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents not currently employed but with an employment history.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BJNUM

[if F4AACTF eq <1> and F4AACTP eq <1>]

THE RESPONDENT IS CURRENTLY WORKING FOR PAY AT A FULL- AND A PART-TIME JOB.

[else]

[if F4AACTF eq <2> and F4AACTP eq <2>]

At that time, did you have more than one job, including part-time, evening, and weekend work?

[else]

Do you currently have more than one job, including part-time, evening, and weekend work?

[endif]

1 = YES

2 = NO

F4BJNUM

[endif]

[if F4AACTF eq <1> and F4AACTP eq <1>]

You said before that you are currently working at a full-time and a part-time job.

[endif]

[if F4BJNUM eq <1>]

[if F4AACTF eq <2> and F4AACTP eq <2>]

[else]

Altogether, how many jobs do you have?

Range (2-10) : (F4BJCNT)

[endif][endif]

Note: "No" response recoded from 2 to 0.

Applies to: Respondents currently employed.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BJCNT

Number of jobs working for pay

See F4BJNUM for description.

Applies to: Respondents currently employed at more than one job.

Sources: NELS:88/2000 Full Scale CATI/CAP
F4BOCTV

[if F4AEMPL eq <1>]

[if F4BJNUM eq <1>]

I would like you to answer the following questions for your primary or most important job.

For your primary job, what is your job title?

[else]

What is your job title?

[endif]

[else]

[if F4AEMPL eq <2>]

For your most recent job, what was your job title?

[else]

[if F4BJNUM eq <2> or F4BJNUM lt <0>]

What was your job title?

[else]

What was your most recent job title?

[endif]

[endif]

[endif]

COLLECT JOB TITLE: UP TO 30 CHARACTERS.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BOCDT

What

[if F4AEMPL eq <1>]

do you do as a/an [F4BOCTV]?

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

did you do as a/an [F4BOCTV]?

[endif]

[endif]

NOTE TO INTERVIEWER: COLLECT DESCRIPTION OF JOB DUTIES.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BWSLF

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

For your job as an employee, were you working for yourself or someone else?

[else][if F4AEMPL eq <1>]

For your job as a/an [F4BOCTV], are you working for yourself or someone else?

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

For your job as a/an [F4BOCTV], were you working for yourself or someone else?

[endif][endif]

[endif]

1 = SELF-EMPLOYED

2 = SOMEONE ELSE

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BWFOR

What type of company

[if F4AEMPL eq <1>]

employs you? Is it a...

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

employed you? Was it a...

[endif]

[endif]

READ AS NECESSARY.

1 = private, for-profit, company

2 = NON-PROFIT COMPANY (OR, NOT-FOR-PROFIT COMPANY)

3 = LOCAL GOVERNMENT

4 = STATE GOVERNMENT

5 = FEDERAL GOVERNMENT, INCLUDING CIVILIAN

EMPLOYEES OF THE MILITARY

6 = MILITARY, INCLUDING NATIONAL GUARD

Applies to: Respondents employed anytime after December 1993 but not self-employed.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BOCIN

[if F4AEMPL eq <1>]

What type of business do you work in

as a/an [F4BOCTV]?

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

What type of business did you work

in as a/an [F4BOCTV]?

[endif]

[endif]

Applies to: Respondents employed anytime after December 1993 and not employed by government.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BXOCCD

Current/previous occupation code

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BOCSTR

Primary job title/duties-verbatim

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BJCDSS

Primary job title/duties - standard string

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BXINCD

Current/previous industry code

Applies to: Respondents employed anytime after December 1993 and not employed by government.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BICDVS

Business/ind-code verbatim string

Applies to: Respondents employed anytime after December 1993 and not

employed by government.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BICDSS

Business/ind-code-standard string

Applies to: Respondents employed anytime after December 1993 and not employed by government.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BJSR

Start date of job

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BHGJ

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

How did you find your job as an employee?

[else]

How did you find your job as a/an [F4BOCTV]?

[endif]

1 = FRIENDS AND RELATIVES (NETWORKING WITH)

2 = PERSONAL INITIATIVE (APPLIED FOR, CALLED AROUND, ETC.)

3 = CLASSIFIED ADS/JOB LISTINGS IN PAPER AND ELECTRONICALLY

4 = EMPLOYMENT AGENCY/OFFICE

(LABOR DEPT, JOB FAIR, SCHOOL CAREER CENTER)

5 = FORMER EMPLOYER, COMPANY TRANSFER, NETWORKING ON JOB

6 = VOLUNTEERING, INTERNSHIP, OR COMMUNITY SERVICE

7 = OTHER

[if F4BHGJ eq <7>]

OTHER SPECIFY:

[endif]

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BHGJS

How got current job-specify

See F4BHGJ for description.

Applies to: Respondents employed anytime after December 1993 with a response not in the list.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BRATE

For your

[if F4AEMPL eq <1>]

current

[else]

most recent

[endif]

job, about how much

[if F4AEMPL eq <1>]

do

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

did

[endif]

[endif]

you earn before taxes and other deductions?

ENTER AMOUNT: F4BRATE

INTERVIEWER: RECORD THE TIME SCALE OF THE AMOUNT.
(E.G. \$30,000 PER YEAR)

1 = HOURLY

2 = WEEKLY

3 = TWICE MONTHLY; EVERY TWO WEEKS

4 = MONTHLY

5 = ANNUALLY (F4BRATP)

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BRATP

Earnings rate-period

See F4BRATE for description.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BJHPW

How many hours per week, in a typical week,

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

do you currently work for pay in your job as
an employee?

[else][if F4AEMPL eq <1>]

do you currently work for pay in your job as
a/an [F4BOCTV]?

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

did you work for pay in your job as
a/an [F4BOCTV]?

[endif]

[endif][endif]

ENTER HOURS PER WEEK: RANGE (1-80)

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BAHPW

Now I would like you to consider all of your current
jobs for pay. How many hours per week do you work for
pay in a typical week at these jobs?

RANGE: (1-80)

[if NBL_CHK eq <1>]

Hours per week for all jobs ([F4BAHPW]) must
be greater than or equal to the [F4BJHPW] hours
per week reported for current/recent job.

Please correct.

[endif]

Applies to: Respondents currently working two or more jobs for pay.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BFTW

Would you prefer to work a full-time
workweek (35 hours or more per week)?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents currently working less than 35 hours per week.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4BWKSWK

For the next items, I want to ask about your employment last year in 1999, and in the two years before that.

Across all your jobs during the 1999 calendar year, how many weeks did you work for pay?

Please include all paid time off such as vacations, sick leave, and family leave in your weeks spent working. (Do not include the time you have spent out of work, between jobs, or without pay.)

WEEKS WORKED FOR PAY: RANGE (0-52):

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4BLHPW

How many hours did you work for pay at all jobs in a typical week in 1999?

HOURS PER WEEK RANGE: (0-80)

Applies to: Respondents employed in 1999.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4BJ98A

Now, I would like you to think back to the year before last.

During the 1998 calendar year, were you employed for six months or more during the year?

1 = YES

2 = NO

F4BJ98A

[if F4BJ98A eq <1> or F4BJ98A eq <-1> or F4BJ98A eq <-2>]

For this employment in 1998, were you employed primarily full-time or part time?

1 = Full Time

2 = Part Time

(F4BJ98B)

[endif]

Note: "No" response recoded from 2 to 0.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4BJ98B

Held employment full time in 1998

See F4BJ98A for description.

Applies to: Respondents employed anytime after December 1993 who were employed for at least six months during 1998.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BJ97A

[if F4BJST lt <1998> and F4BJST ne <-1> and F4BJST ne <-2> and F4BJST ne <>]

Now, I would like you to think back to the year 1997.

[else]

Now, I would like you to go back a year further to 1997.

[endif]

Were you employed for six months or more during the 1997 calendar year ?

1 = YES

2 = NO

F4BJ97A

[if F4BJ97A eq <1> or F4BJ97A eq <-1> or F4BJ97A eq <-2>]

For this employment in 1997, were you employed
primarily full-time or part time?

1 = Full Time

2 = Part Time

(F4BJ97B)

[endif]

Note: "No" response recoded from 2 to 0.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BJ97B

Held employment full time in 1997

See F4BJ97A for description.

Applies to: Respondents employed anytime after December 1993 who were
employed for at least six months during 1997.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BSPAY

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

Now, considering your

[if F4AEMPL eq <1>]

current

[else]

most recent

[endif]

job as an employee, would you say that you

[else]

Now, considering your

[if F4AEMPL eq <1>]

current

[else]

most recent

[endif]

job as a/an [F4BOCTV], would you say that you

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

were

[else]

[if F4AEMPL eq <1>]

are

[endif]

[endif][endif]

satisfied or dissatisfied

with each of the following elements of your job.

1 = SATISFIED 2 = DISSATISFIED F3 = DK/UNABLE TO EVALUATE

Your pay?.....F4BSPAY

Fringe benefits?.....(F4BSFRG)

Importance and challenge of your work?.....(F4BSIMP)

Opportunities for promotion and advancement?.....(F4BSPRO)

Opportunities to use past training & education?.....(F4BSED1)

Job security?.....(F4BSSEC)

Opportunities for further training & education?.....(F4BSED2)

Overall, would you say you

[if F4AEMPL eq <2>]

were
 [else]
 are
 [endif]
 satisfied or
 dissatisfied with your job as a whole?.....(F4BSOVR)
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSFRG
 Job satisfaction-fringe benefits
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSIMP
 Job satisfaction-work importance
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSPRO
 Job satisfaction-promotion opportunity
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSED1
 Job satisfaction-job security
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSSEC
 Job satisfaction-use of past training
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSED2
 Job satisfaction-further training
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BSOVR
 Job satisfaction-overall satisfaction
 See F4BSPAY for description.
 Applies to: Respondents employed anytime after December 1993.
 Sources: NELS:88/2000 Full Scale CATI/CAP
 F4BJAUT
 [if F4BOCTV eq <-1> or F4BOCTV eq <-2>]
 Which one of the following four statements best describes your
 job as an employee?
 [else]
 Which one of the following four statements best describes your
 job as a/an [F4BOCTV]?
 [endif]
 INTERVIEWER: READ ALL RESPONSE OPTIONS.
 [if F4AEMPL eq <2> or F4AEMPL It <0>]

1 = someone else decided what you did and how you did it,
 2 = someone else decided what you did, but you decided how to do it,
 3 = you had some freedom in deciding what you did and how you did it, or
 4 = you were basically your own boss

[else]

[if F4AEMPL eq <1>]

1 = someone else decides what you do and how you do it,
 2 = someone else decides what you do, but you decide how to do it,
 3 = you have some freedom in deciding what you do and how to do it, or
 4 = you are basically your own boss

[endif]

[endif]

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BRETR

[if F4BWSLF eq <1> and (F4BOCTV ne <-1> and F4BOCTV ne <-2>)]

As a self-employed [F4BOCTV] do you have a retirement plan?

[else]

[if F4AEMPL eq <1>]

Does your employer

[else]

[if F4AEMPL eq <2> or F4AEMPL lt <0>]

Did your former employer

[endif]

[endif]

offer you a retirement plan?

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents employed anytime after December 1993.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BLTRL

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

For the following activities you might do as part of your job as an employee, please tell me how often you do them in a typical week.

The response options are never, occasionally, or a lot.

[else]

For the following activities you might do as part of your job as a/an [F4BOCTV], please tell me how often you do them in a typical week.

The response options are never, occasionally, or a lot.

[endif]

RESPONSE OPTIONS: (0) NEVER, (1) OCCASIONALLY, (2) A LOT

How often in a typical week do you...

read letters, memos, or reports?.....F4BLTRL

write letters, memos, or reports?.....(F4BLTWL)

read manuals or reference books, including catalogues?..(F4BLTRM)

Applies to: Respondents currently working for pay.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BLTWL

Applied literacy-write letters

See F4BLTRL for description.

Applies to: Respondents currently working for pay.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BLTRM

Applied literacy-read manuals

See F4BLTRL for description.

Applies to: Respondents currently working for pay.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BNMRD

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

The next questions are about the role that mathematics plays in your job as an employee. Again, please tell me how often you do them in a typical week: never, occasionally, or a lot.

[else]

The next questions are about the role that mathematics plays in your job as a/an [F4BOCTV]. Again, please tell me how often you do them in a typical week: never, occasionally, or a lot.

[endif]

RESPONSE OPTIONS: (0) NEVER, (1) OCCASIONALLY, (2) A LOT

How often in a typical week do you...

read or fill out bills, invoices, spreadsheets, or budgets?... F4BNMRD

measure or estimate the size or weight of objects?.....(F4BNMMS)

calculate prices, costs, or technical specifications?... (F4BNMCA)

Applies to: Respondents currently working for pay.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BNMMS

Applied numeracy-measure/estimate size

See F4BNMRD for description.

Applies to: Respondents currently working for pay.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BNMCA

Applied numeracy-calculate specification

See F4BNMRD for description.

Applies to: Respondents currently working for pay.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4BCUSE

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]

How often do you use a computer in a typical week at your job?

[else]

Again, for your job as a/an [F4BOCTV], how often do you use a computer in a typical week?

[endif]

RESPONSE OPTIONS: (0) NEVER, (1) OCCASIONALLY, (2) A LOT F4BCUSE

[if F4BCUSE gt <0>]

For your job, how often do you use the computer ...

for word processing?.....(F4BWPR)
 to send and receive e-mail?.....(F4BMAIL)
 to search the Internet?.....(F4BINET)
 to perform technical activities such as data entry and
 access, spreadsheets, and other computer programs?.....(F4BTECH)
 to write software or applications for the computer?.....(F4BPROG)
 [endif]
 Applies to: Respondents currently working for pay.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4BWPR
 Computer skills-word processing on job
 See F4BCUSE for description.
 Applies to: Respondents currently working for pay who use a computer
 in their job.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4BMAIL
 Computer skills-send email on job
 See F4BCUSE for description.
 Applies to: Respondents currently working for pay who use a computer
 in their job.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4BINET
 Computer skills-search Internet on job
 See F4BCUSE for description.
 Applies to: Respondents currently working for pay who use a computer
 in their job.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4BTECH
 Computer skills-use spreadsheets, etc
 See F4BCUSE for description.
 Applies to: Respondents currently working for pay who use a computer
 in their job.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4BPROG
 Computer skills-write software on job
 See F4BCUSE for description.
 Applies to: Respondents currently working for pay who use a computer
 in their job.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4BJ30V
 [if F4AEMPL ne <1>]
 CURRENT OCCUPATION: NONE
 [else]
 [if F4BOCTV ne <-1> and F4BOCTV ne <-2>]
 CURRENT OCCUPATION: [F4BOCTV]
 [else]
 CURRENT OCCUPATION: DON'T KNOW/REFUSED
 [endif]
 [endif]
 What job or occupation do you plan to have when you are age 30?
 INTERVIEWER: RECORD VERBATIM RESPONSE AND CODE OCCUPATION
 1 = FUTURE OCCUPATION IS SAME AS CURRENT OCCUPATION
 Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BJ30CD

Planned occupation at age 30 code

Applies to: Respondents desiring a different occupation at age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BOCCV

Primary job title - verbatim string

Applies to: Respondents desiring a different occupation at age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4BJ30S

Job expected at age 30 - standard string

Applies to: Respondents desiring a different occupation at age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLICQ

[if YERNLIC eq <1> and YNUMLIC gt <0> and YF3STAT eq <1>]

When we last spoke with you in 1994, you noted that you had received [YNUMLIC] professional license(s) or professional credential(s) since leaving high school.

INTERVIEWER: LICENSES REPORTED IN 1994:

[YTYPLC1]

[YTYPLC2]

[YTYPLC3]

[YTYPLC4]

[YTYPLC5]

Have you received any more since that time?

[else]

[if YERNLIC eq <2> and YF3STAT eq <1>]

When we last spoke with you in 1994, you noted that you had not received any professional licenses or professional credentials since leaving high school.

Have you received any since that time?

For example, these might be a real estate or cosmetology license, teacher's certificate, or network engineering credential. Do not consider certificates provided for the completion of academic programs at postsecondary schools.

[else]

[if YERNLIC lt <0> or (YERNLIC eq <1> and YNUMLIC lt <0>) or YF3STAT eq <2>]

Have you received any professional licenses or professional credentials since leaving high school?

(For example, these might be a real estate or cosmetology license, teacher's certificate, or network engineering credential. Do not consider certificates provided for the completion of academic programs at postsecondary schools.)

[endif]

[endif]

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLCR1

[if YERNLIC eq <1>]

What additional professional licenses have you earned since we last spoke with you?

[else]

[if YERNLIC eq <2>]

What professional licenses have you earned since we last spoke with you?

[else]

[if YERNLIC lt <0>]

What professional licenses have you earned since high school?

[endif]

[endif]

[endif]

ENTER CODES IN THE ORDER MENTIONED. ENTER 0 FOR NO MORE.
MULTIPLE LICENSES IN THE SAME AREA ARE POSSIBLE.

1. COSMETOLOGY/BEAUTICIAN/BARBER
2. PERSONAL SERVICES (MASSAGE THERAPY)
3. FOOD SERVICES
4. CHILD CARE/DAY CARE/TEACHER AIDE
5. AUTOMOTIVE/MECHANIC REPAIR
6. COMPUTER/ELECTRONIC/TV/VCR REPAIR
7. COMPUTER PROGRAMMER/SYSTEMS TECH
8. CRAFTS(ELECTRICIAN,CARPENTER,MASON)
9. MEDICAL/DENTAL TECH. OR THERAPIST
10. NURSE AIDE/HOME HEALTH AIDE
11. NURSING (RN, LPN)
12. BUSINESS (BROKER,CPA,REALTOR)
13. LEGAL ASSISTANT/PARALEGAL
14. COMMUNICATIONS/BROADCAST(FCC)
15. COMMERCIAL OPERATOR/TRANSPORT.
16. PROF. ENGINEERING/ARCHITECTURE
17. EDUCATOR (TEACHER,PRINCIPAL)
18. MEDICAL (PHYSICIAN)
19. LAW OR LEGAL
20. COUNSELOR OR PSYCHOLOGIST
21. OTHER LICENSE OR CERTIFICATE

RESPONSES (up to 5) F4CLCR1 (F4CLCR2) (F4CLCR3) (F4CLCR4) (F4CLCR5)
Applies to: Respondents indicating new license since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP I
F4CLCR2

Licenses since last contact-2
See F4CLCR1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents indicating new license since last contact.
Sources: NELS:88/2000 Full Scale CATI/CAP I

F4CLCR3

Licenses since last contact-3
See F4CLCR1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents indicating new license since last contact.
Sources: NELS:88/2000 Full Scale CATI/CAP I

F4CLCR4

Licenses since last contact-4

See F4CLCR1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents indicating new license since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLCR5

Licenses since last contact-5

See F4CLCR1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents indicating new license since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLRS1

NOTE TO INTERVIEWER: RECORD OTHER TYPE OF LICENSE.

SPECIFY FIRST OTHER TYPE OF LICENSE

F4CLRS1

SPECIFY SECOND OTHER TYPE OF LICENSE

(F4CLRS2)

SPECIFY THIRD OTHER TYPE OF LICENSE

(F4CLRS3)

SPECIFY FOURTH OTHER TYPE OF LICENSE

(F4CLRS4)

SPECIFY FIFTH OTHER TYPE OF LICENSE

(F4CLRS5)

Applies to: Respondents indicating "other specify" to type of license.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLRS2

License since last contact-specify 2

See F4CLRS1 for description.

Applies to: Respondents indicating "other specify" to type of license.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLRS3

License since last contact-specify 3

See F4CLRS1 for description.

Applies to: Respondents indicating "other specify" to type of license.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLRS4

License since last contact-specify 4

See F4CLRS1 for description.

Applies to: Respondents indicating "other specify" to type of license.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CLRS5

License since last contact-specify 5

See F4CLRS1 for description.

Applies to: Respondents indicating "other specify" to type of license.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CJ12MO

Job held in last 12 months of interview date

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CTRQ

During the last twelve months, have you participated in any training related to your job as a/an

[if F4BOCTV eq <-1> or F4BOCTV eq <-2>]
employee?

[else]

[F4BOCTV]?

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents employed during the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CTREQ

Thinking about your last job-related training, was the
training ...

[if F4BWSLF eq <1>]

1 = required for your job,

[else]

1 = required by your employer,

[endif]

[if F4BWSLF eq <1>]

2 = encouraged for your job, or

[else]

2 = encouraged by your employer, or

[endif]

3 = taken at your own initiative?

Applies to: Respondents who participated in training in the last 12
months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CWORK

Did your employer...

1 = YES, 2 = NO: RECORD RESPONSE TO EACH OF THE FOLLOWING.

give you time off from work to attend training at your
work place?.....F4CWORK

give you time off from work to attend training away
from your work place?.....(F4COFFS)

pay all or part of the cost of training, including
tuition or books?.....(F4CCOST)

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12
months who were not self-employed.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4COFFS

Employment support-training offsite

See F4CWORK for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12
months who were not self-employed.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4CCOST

Employment support-training costs paid

See F4CWORK for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12
months who were not self-employed.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CRSN1

What were your reasons for taking the training?

ENTER CODES IN THE ORDER MENTIONED. ENTER 0 FOR NO MORE.

1 = TO IMPROVE, ADVANCE, OR KEEP UP TO DATE ON CURRENT JOB

2 = TO TRAIN FOR A NEW JOB OR A NEW CAREER

3 = TO IMPROVE BASIC READING, WRITING, OR MATH SKILLS

4 = REQUIRED OR ENCOURAGED BY MY EMPLOYER

5 = TO IMPROVE COMMUNICATION AND LANGUAGE SKILLS

6 = FOR A PERSONAL, FAMILY OR SOCIAL REASON

7 = SOME OTHER REASON

F4CRSN1 (F4CRSN2) (F4CRSN3)

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CRSN2

Training purpose-2

See F4CRSN1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CRSN3

Training purpose-3

See F4CRSN1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CRSP1

SPECIFY FIRST OTHER REASON PROVIDED

F4CRSP1

SPECIFY SECOND OTHER REASON PROVIDED

(F4CRSP2)

SPECIFY THIRD OTHER REASON PROVIDED

(F4CRSP2)

Applies to: Respondents indicating "other specify" to reasons for taking training.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CRSP2

Training purpose-specify 2

See F4CRSP1 for description.

Applies to: Respondents indicating "other specify" to reasons for taking training.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CRSP3

Training purpose-specify 3

See F4CRSP1 for description.

Applies to: Respondents indicating "other specify" to reasons for taking training.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4CJOBS

Would you say that the job-related training you have

received in the last 12 months has...

1 = YES, 2 = NO, F3 = DK/UNABLE TO EVALUATE

provided you with opportunities for other jobs you could not have gotten without training?.....F4CJOBS

allowed you to earn higher salaries?.....(F4CHSAL)

enabled you to take on more responsibility on the job?..(F4CRESP)

resulted in more opportunities for promotion?.....(F4CPROM)

improved your performance at your job?.....(F4CPERF)

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4CHSAL

Training impact-higher salary

See F4CJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4CRESP

Training impact-more responsibility

See F4CJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4CPROM

Training impact-promotion opportunity

See F4CJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4CPERF

Training impact-job performance

See F4CJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who participated in training in the last 12 months.

Sources: NELLS:88/2000 Full Scale CATI/CAPI

F4DHSFIN

[if YHSGRAD lt <0>]

Have you received a high school diploma, certificate of attendance, or a GED?

[else]

[if YHSGRAD eq <4>]

When we last spoke with you, you reported that you were enrolled in high school. Have you received a high school diploma, certificate of attendance, or a GED since that time?

[else]

[if YHSGRAD eq <5> or YHSGRAD eq <6>]

When we last spoke with you, you reported that

[if YHSGRAD eq <5>]

you were working on a high school equivalency degree.

[endif]

[if YHSGRAD eq <6>]

you had not graduated from high school and were not working on your degree.

[endif]

Have you received a high school degree since that time?

[endif][endif]

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents without high school degree in 1994.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4DTYPE

What type of high school degree did you complete?

Did you receive a

1 = high school diploma,

2 = GED certificate, or

3 = certificate of attendance?

Applies to: Respondents completing high school since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4DHSACT

Which of the following activities best describes your current high school activity. Are you...

1 = currently enrolled in school and working towards a high school diploma or certificate of attendance, or

2 = currently working towards an equivalent degree (GED), or 3

= not currently enrolled in a high school completion program?

Applies to: Respondents not completing high school.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4DHSG

Date finished high school

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents completing high school since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4DGEDP

[if YHSGRAD eq <2> and YRECDMM ne <> and YRECDYY ne <>]

When we interviewed you before, you said you had received a GED.

Did

[else]

[if F4DTYPE eq <2> or YHSGRAD eq <2> and (YRECDMM eq <> or YRECDYY eq <>)]

When you completed your GED, did

[endif]

[endif]

you take a GED preparation course or classes

before taking the GED exam?

[if F4DHSG lt <0> and YRECDYY lt <0>]

[else]

INTERVIEWER: GED CERTIFICATE COMPLETED IN

[if YHSGRAD eq <2> and YRECDMM gt <0> and YRECDYY gt <0>]

[NDL_GEDM], [YRECDYY]

[else][if NDL_GEDM ne <>]

[NDL_GEDM],

[endif]

[if F4DHSG gt <0>]

[F4DHSG]

[else]

[YRECDYY]

[endif]

[endif]

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents ever finishing high school with GED or equivalent.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4DGED1

Why did you decide to complete your GED?

ENTER CODES IN THE ORDER MENTIONED; ENTER 0 FOR NO MORE.

1 = TO IMPROVE, ADVANCE OR KEEP UP TO DATE ON CURRENT JOB

2 = TO TRAIN FOR A NEW JOB OR NEW CAREER

3 = TO IMPROVE BASIC READING, WRITING OR MATH SKILLS

4 = TO MEET REQUIREMENTS FOR ADDITIONAL STUDY

5 = REQUIRED OR ENCOURAGED BY MY EMPLOYER

6 = PERSONAL, FAMILY OR SOCIAL REASON

7 = OTHER MAIN REASON (UP TO 3 REASONS)

F4DGED1 (F4DGED2) (F4DGED3)

Applies to: Respondents ever finishing high school with GED or equivalent.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4DGED2

Reason for getting GED-2

See F4DGED1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents ever finishing high school with GED or equivalent.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4DGED3

Reason for getting GED-3

See F4DGED1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents ever finishing high school with GED or equivalent.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4DSP1

SPECIFY FIRST OTHER MAIN REASON

F4DSP1

SPECIFY SECOND OTHER MAIN REASON

(F4DSP1)

SPECIFY THIRD OTHER MAIN REASON

(F4DSP1)

Applies to: Respondents who indicate "other specify" as main reason

for completing GED.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4DSP2

Reason for getting GED-specify 2

See F4DSP1 for description.

Applies to: Respondents who indicate "other specify" as main reason for completing GED.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4DSP3

Reason for getting GED-specify 3

See F4DSP1 for description.

Applies to: Respondents who indicate "other specify" as main reason for completing GED.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EANY

[if YPSENUM gt <0>]

When we spoke with you in 1994, you indicated that you had attended

[if YPSENUM eq <1>]

[NES1NAME]

[endif]

[if YPSENUM eq <2>]

[NES1NAME] and [NES2NAME]

[endif]

[if YPSENUM eq <3>]

[NES1NAME], [NES2NAME] and [NES3NAME]

[endif]

[if YPSENUM eq <4>]

[NES1NAME], [NES2NAME], [NES3NAME] and [NES4NAME]

[endif]

[if YPSENUM eq <5>]

[NES1NAME], [NES2NAME], [NES3NAME], [NES4NAME] and [NES5NAME]

[endif]

after high school.

Since that time, have you attended any other

[else]

[if YPSENUM le <0> and (YHSGRAD ne <4> and F4DHSFIN ne <2>)]

Since leaving high school, have you attended any

[else]

Have you attended any

[endif]

[endif]

college, university, or vocational, technical or trade school for academic credit?

1 = YES (PROCEED TO THE USER EXIT)

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPD1

IPEDS school attended-code 1

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIP1

IPEDS school attended-level 1

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIP2

IPEDS school attended-control 1

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIP3

IPEDS school attended-state 1

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIP4

IPEDS school attended-city 1

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIP5

IPEDS school attended-name 1

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIP6

DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:

[if NES1NAME ne <>]

[NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if NES2NAME ne <>]

[NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if NES3NAME ne <>]

[NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if NES4NAME ne <>]

[NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if NES5NAME ne <>]

[NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NES6NAME ne <>]

[NES6NAME] [NES6CITY] [NES6STAT]

[endif]

Did you attend anywhere else?

1 = YES (PROCEED TO USER EXIT)

2 = NO MORE SCHOOLS

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPD2

IPEDS school attended-code 2

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPL2

IPEDS school attended-level 2

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPT2

IPEDS school attended-control 2

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPS2

IPEDS school attended-state 2

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPC2

IPEDS school attended-city 2

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPN2

IPEDS school attended-name 2

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4E3PSE

DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:

[if NES1NAME ne <>]

[NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if NES2NAME ne <>]

[NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if NES3NAME ne <>]

[NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if NES4NAME ne <>]

[NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if NES5NAME ne <>]

[NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NES6NAME ne <>]

[NES6NAME] [NES6CITY] [NES6STAT]

[endif]

[if NES7NAME ne <>]

[NES7NAME] [NES7CITY] [NES7STAT]

[endif]

Did you attend elsewhere?

1 = YES (PROCEED TO USER EXIT)

2 = NO MORE SCHOOLS

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPD3

IPEDS school attended-code 3

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPL3

IPEDS school attended-level 3

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPT3

IPEDS school attended-control 3

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPS3

IPEDS school attended-state 3

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPC3

IPEDS school attended-city 3

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPN3

IPEDS school attended-name 3

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E4PSE

DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:

[if NES1NAME ne <>]

[NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if NES2NAME ne <>]

[NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if NES3NAME ne <>]

[NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if NES4NAME ne <>]

[NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if NES5NAME ne <>]

[NES5NAME] [NES5CITY] [NES5STAT]

```

[endif]
[if NES6NAME ne <>]
[NES6NAME] [NES6CITY] [NES6STAT]
[endif]
[if NES7NAME ne <>]
[NES7NAME] [NES7CITY] [NES7STAT]
[endif]
[if NES8NAME ne <>]
[NES8NAME] [NES8CITY] [NES8STAT]
[endif]
Did you attend elsewhere?
1 = YES (PROCEED TO USER EXIT)
2 = NO MORE SCHOOLS
Note: "No" response recoded from 2 to 0.
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EIPD4
IPEDS school attended-code 4
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EIPL4
IPEDS school attended-level 4
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EIPT4
IPEDS school attended-control 4
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EIPS4
IPEDS school attended-state 4
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EIPC4
IPEDS school attended-city 4
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EIPN4
IPEDS school attended-name 4
Applies to: Respondents with postsecondary education experience since
last contact.
Sources: NELS:88/2000 Full Scale CATI/CAPI
F4E5PSE
DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:
[if NES1NAME ne <>]
[NES1NAME] [NES1CITY] [NES1STAT]
[endif]
[if NES2NAME ne <>]

```

[NES2NAME] [NES2CITY] [NES2STAT]
[endif]

[if NES3NAME ne <>]
[NES3NAME] [NES3CITY] [NES3STAT]
[endif]

[if NES4NAME ne <>]
[NES4NAME] [NES4CITY] [NES4STAT]
[endif]

[if NES5NAME ne <>]
[NES5NAME] [NES5CITY] [NES5STAT]
[endif]

[if NES6NAME ne <>]
[NES6NAME] [NES6CITY] [NES6STAT]
[endif]

[if NES7NAME ne <>]
[NES7NAME] [NES7CITY] [NES7STAT]
[endif]

[if NES8NAME ne <>]
[NES8NAME] [NES8CITY] [NES8STAT]
[endif]

[if NES9NAME ne <>]
[NES9NAME] [NES9CITY] [NES9STAT]
[endif]

Did you attend elsewhere?

1 = YES (PROCEED TO USER EXIT)

2 = NO MORE SCHOOLS

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP
F4EIPD5

IPEDS school attended-code 5

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP
F4EIPL5

IPEDS school attended-level 5

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP
F4EIPT5

IPEDS school attended-control 5

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP
F4EIPS5

IPEDS school attended-state 5

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP
F4EIPC5

IPEDS school attended-city 5

Applies to: Respondents with postsecondary education experience since

last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPN5

IPEDS school attended-name 5

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E6PSE

DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:

[if NES1NAME ne <>]

[NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if NES2NAME ne <>]

[NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if NES3NAME ne <>]

[NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if NES4NAME ne <>]

[NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if NES5NAME ne <>]

[NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NES6NAME ne <>]

[NES6NAME] [NES6CITY] [NES6STAT]

[endif]

[if NES7NAME ne <>]

[NES7NAME] [NES7CITY] [NES7STAT]

[endif]

[if NES8NAME ne <>]

[NES8NAME] [NES8CITY] [NES8STAT]

[endif]

[if NES9NAME ne <>]

[NES9NAME] [NES9CITY] [NES9STAT]

[endif]

[if NES10NAM ne <>]

[NES10NAM] [NES10CIT] [NES10STA]

[endif]

Did you attend elsewhere?

1 = YES (PROCEED TO USER EXIT)

2 = NO MORE SCHOOLS

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPD6

IPEDS school attended-code 6

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPL6

IPEDS school attended-level 6

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPT6

IPEDS school attended-control 6

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPS6

IPEDS school attended-state 6

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPC6

IPEDS school attended-city 6

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPN6

IPEDS school attended-name 6

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E7PSE

DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:

[if NES1NAME ne <>]

[NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if NES2NAME ne <>]

[NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if NES3NAME ne <>]

[NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if NES4NAME ne <>]

[NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if NES5NAME ne <>]

[NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NES6NAME ne <>]

[NES6NAME] [NES6CITY] [NES6STAT]

[endif]

[if NES7NAME ne <>]

[NES7NAME] [NES7CITY] [NES7STAT]

[endif]

[if NES8NAME ne <>]

[NES8NAME] [NES8CITY] [NES8STAT]

[endif]

[if NES9NAME ne <>]

[NES9NAME] [NES9CITY] [NES9STAT]

[endif]

[if NES10NAM ne <>]

[NES10NAM] [NES10CIT] [NES10STA]

[endif]

[if NES11NAM ne <>]

[NES11NAM] [NES11CIT] [NES11STA]

[endif]

Did you attend elsewhere?

1 = YES (PROCEED TO USER EXIT)

2 = NO MORE SCHOOLS

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPD7

IPEDS school attended-code 7

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPL7

IPEDS school attended-level 7

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPT7

IPEDS school attended-control 7

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPS7

IPEDS school attended-state 7

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPC7

IPEDS school attended-city 7

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPN7

IPEDS school attended-name 7

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E8PSE

DO NOT ENTER DUPLICATES; SCHOOLS WE KNOW ABOUT SO FAR ARE:

[if NES1NAME ne <>]

[NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if NES2NAME ne <>]

[NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if NES3NAME ne <>]

[NES3NAME] [NES3CITY] [NES3STAT]

[endif]

```
[if NES4NAME ne <>]
[NES4NAME] [NES4CITY] [NES4STAT]
[endif]
```

```
[if NES5NAME ne <>]
[NES5NAME] [NES5CITY] [NES5STAT]
[endif]
```

```
[if NES6NAME ne <>]
[NES6NAME] [NES6CITY] [NES6STAT]
[endif]
```

```
[if NES7NAME ne <>]
[NES7NAME] [NES7CITY] [NES7STAT]
[endif]
```

```
[if NES8NAME ne <>]
[NES8NAME] [NES8CITY] [NES8STAT]
[endif]
```

```
[if NES9NAME ne <>]
[NES9NAME] [NES9CITY] [NES9STAT]
[endif]
```

```
[if NES10NAM ne <>]
[NES10NAM] [NES10CIT] [NES10STA]
[endif]
```

```
[if NES11NAM ne <>]
[NES11NAM] [NES11CIT] [NES11STA]
[endif]
```

```
[if NES12NAM ne <>]
[NES12NAM] [NES12CIT] [NES12STA]
[endif]
```

Did you attend elsewhere?

1 = YES (PROCEED TO USER EXIT)

2 = NO MORE SCHOOLS

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPD8

IPEDS school attended-code 8

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPL8

IPEDS school attended-level 8

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPT8

IPEDS school attended-control 8

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EIPS8

IPEDS school attended-state 8

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPC8

IPEDS school attended-city 8

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EIPN8

IPEDS school attended-name 8

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EFST

[if YPSENUM eq <1>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if YPSENUM eq <2>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if YPSENUM eq <3>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if YPSENUM eq <4>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if YPSENUM eq <5>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

5 = [NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NENEWSCH eq <1>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

[endif]

[if NENEWSCH eq <2>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

[endif]

[if NENEWSCH eq <3>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

8 = [NES8NAME] [NES8CITY] [NES8STAT]

[endif]

[if NENEWSCH eq <4>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

8 = [NES8NAME] [NES8CITY] [NES8STAT]

```

9 = [NES9NAME] [NES9CITY] [NES9STAT]
[endif]
[if NENEWSCH eq <5>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
[endif]
[if NENEWSCH eq <6>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
[endif]
[if NENEWSCH eq <7>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
[endif]
[if NENEWSCH eq <8>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
13 = [NES13NAM] [NES13CIT] [NES13STA]
[endif]
[if NES2NAME eq <> or NES3NAME eq <> or NES4NAME eq <> or
NES5NAME eq <> or NES6NAME eq <> or NES7NAME eq <> or
NES8NAME eq <> or NES9NAME eq <> and NES10NAM eq <>]
[else]
[endif]
Which of the schools you mentioned did you attend first?
ENTER NUMBER OF FIRST SCHOOL : F4EFST
[if F4AACTV eq <1> or F4AACTG eq <1>]
Which of the schools do you currently attend?
[else]
Which of the schools did you attend most recently?
[endif]
ENTER NUMBER OF MOST REC/CURRENT SCHOOL: (F4ELST)
Applies to: Respondents with postsecondary education experience at
multiple schools since last contact.
Sources: NELS:88/2000 Full Scale CATI/CAP
F4ELST

```

Most recent PSE institution attended

See F4EFST for description.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EFMY

Date first attended postsecondary school

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELMY

Date most recently attended postsecondary school

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDEGR

[if NEL_ONE eq <1>]

Have you earned a degree or certificate from [NELSTSCH]?

[else]

Have you earned a degree or certificate from any college or trade school since high school?

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDGR1

[if YPSEATN eq <5> or YPSEATN eq <6> or YPSEATN eq <7>]

[if YPSEATN eq <5>]

When we spoke with you in 1994, you said you had earned a certificate from a university, college, or trade school.

[endif]

[if YPSEATN eq <6>]

When we spoke with you in 1994, you said you had earned an associate's degree from a university, college, or trade school.

[endif]

[if YPSEATN eq <7>]

When we spoke with you in 1994, you said you had earned a bachelor's degree from a university, college, or trade school.

[endif]

What other types of degrees or certificates, if any, did you receive?

[else]

What types of degrees or certificates did you receive?

[endif]

ENTER 0 FOR NO MORE.

1 = Certificate

2 = Associate's Degree

3 = Bachelor's Degree

4 = Master's Degree

5 = Ph.D. or equivalent (E.G., ED.D., D.P.H.)

6 = Professional doctorate (M.D., J.D., L.L.B., D.D.S. ETC.)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPGR1

[if YPSENUM eq <1>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if YPSENUM eq <2>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if YPSENUM eq <3>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if YPSENUM eq <4>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if YPSENUM eq <5>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

5 = [NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NENEWSCH eq <1>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

[endif]

[if NENEWSCH eq <2>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

[endif]

[if NENEWSCH eq <3>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

8 = [NES8NAME] [NES8CITY] [NES8STAT]

[endif]

[if NENEWSCH eq <4>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

8 = [NES8NAME] [NES8CITY] [NES8STAT]

9 = [NES9NAME] [NES9CITY] [NES9STAT]

[endif]

[if NENEWSCH eq <5>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 [endif]

[if NENEWSCH eq <6>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]

[endif]

[if NENEWSCH eq <7>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]

[endif]

[if NENEWSCH eq <8>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]

13 = [NES13NAM] [NES13CIT] [NES13STA]

[endif]

You got your [NEL_FL1] from what institution?

INTERVIEWER: ENTER THE NUMBER FOR THE SCHOOL AWARDING THE DEGREE.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4ED1

Date degree awarded-1

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4EMJ1R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What was your major or program of study for your [NEL_FL1] at [NEL_PRG1]?

F5 = DOUBLE MAJORS

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDMJ1

Double major indicator - deg 1

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ1P

What is/was your primary major or program of study?

F4EMJ1P

What is/was your secondary major?

(F4EMJ1S)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ1S

Secondary major-1st

See F4EMJ1P for description.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ1CD

Major/field of study code-1

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ1V

Major 1st - verbatim string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ1C

Major-1st - standard string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDGR2

[if NEL_ONE eq <1>]

What other degrees or certificates did you receive from [NELSTSCH]?

[else]

What other degrees or certificates, if any, do you have?

[endif]

ENTER 0 FOR NO MORE.

1 = Certificate

2 = Associate's Degree

3 = Bachelor's Degree

4 = Master's Degree

5 = Ph.D. or equivalent (E.G., ED.D., D.P.H.)

6 = Professional doctorate (M.D., J.D., L.L.B., D.D.S. ETC.)

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

```

F4EPGR2
[if YPSENUM eq <1>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
[endif]
[if YPSENUM eq <2>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
[endif]
[if YPSENUM eq <3>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
[endif]
[if YPSENUM eq <4>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
4 = [NES4NAME] [NES4CITY] [NES4STAT]
[endif]
[if YPSENUM eq <5>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
4 = [NES4NAME] [NES4CITY] [NES4STAT]
5 = [NES5NAME] [NES5CITY] [NES5STAT]
[endif]
[if NENEWSCH eq <1>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
[endif]
[if NENEWSCH eq <2>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
[endif]
[if NENEWSCH eq <3>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
[endif]
[if NENEWSCH eq <4>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
[endif]
[if NENEWSCH eq <5>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
[endif]
[if NENEWSCH eq <6>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]

```

7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 [endif]

[if NENEWSCH eq <7>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]
 [endif]

[if NENEWSCH eq <8>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]
 13 = [NES13NAM] [NES13CIT] [NES13STA]
 [endif]

You got your [NEL_FL2] from what institution?

INTERVIEWER: ENTER THE NUMBER FOR THE SCHOOL AWARDDING THE DEGREE.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAP
 F4ED2

Date degree awarded-2

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAP
 F4EMJ2R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What was your major or program of study for your [NEL_FL2] at [NEL_PRG2]?

F5 = DOUBLE MAJORS

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAP
 F4EDMJ2

Double Major indicator - deg 2

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAP
 F4EMJ2P

What is/was your primary major or program of study?

F4EMJ2P

What is/was your secondary major?

(F4EMJ2S)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ2S

Secondary major-2nd

See F4EMJ2P for description.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ2CD

Major/field of study code-2

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ2V

Major 2nd - verbatim string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ2C

Major-2nd - standard string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDGR3

[if NEL_ONE eq <1>]

What other degrees or certificates did you receive from [NELSTSCH]?

[else]

What other degrees or certificates, if any, do you have?

[endif]

ENTER 0 FOR NO MORE.

1 = Certificate

2 = Associate's Degree

3 = Bachelor's Degree

4 = Master's Degree

5 = Ph.D. or equivalent (E.G., ED.D., D.P.H.)

6 = Professional doctorate (M.D., J.D., L.L.B., D.D.S. ETC.)

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPGR3

[if YPSENUM eq <1>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if YPSENUM eq <2>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

[endif]

```

[if YPSENUM eq <3>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
[endif]
[if YPSENUM eq <4>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
4 = [NES4NAME] [NES4CITY] [NES4STAT]
[endif]
[if YPSENUM eq <5>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
4 = [NES4NAME] [NES4CITY] [NES4STAT]
5 = [NES5NAME] [NES5CITY] [NES5STAT]
[endif]
[if NENEWSCH eq <1>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
[endif]
[if NENEWSCH eq <2>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
[endif]
[if NENEWSCH eq <3>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
[endif]
[if NENEWSCH eq <4>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
[endif]
[if NENEWSCH eq <5>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
[endif]
[if NENEWSCH eq <6>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
[endif]
[if NENEWSCH eq <7>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]

```

7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]
 [endif]

[if NENEWSCH eq <8>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]
 13 = [NES13NAM] [NES13CIT] [NES13STA]
 [endif]

You got your [NEL_FL3] from what institution?

INTERVIEWER: ENTER THE NUMBER FOR THE SCHOOL AWARDDING THE DEGREE.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ED3

Date degree awarded-3

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ3R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What was your major or program of study for your

[NEL_FL3] at [NEL_PRG3]?

F5 = DOUBLE MAJORS

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDMJ3

Double major indicator - deg 3

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ3P

What is/was your primary major or program of study?

F4EMJ3P

What is/was your secondary major?

(F4EMJ3S)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ3S

Secondary major-3rd

See F4EMJ3P for description.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ3CD

Major/field of study code-3

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ3V

Major 3rd - verbatim string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ3C

Major-3rd - standard string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDGR4

[if NEL_ONE eq <1>]

What other degrees or certificates did you receive from [NELSTSCH]?

[else]

What other degrees or certificates, if any, do you have?

[endif]

ENTER 0 FOR NO MORE.

1 = Certificate

2 = Associate's Degree

3 = Bachelor's Degree

4 = Master's Degree

5 = Ph.D. or equivalent (E.G., ED.D., D.P.H.)

6 = Professional doctorate (M.D., J.D., L.L.B., D.D.S. ETC.)

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPGR4

[if YPSENUM eq <1>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if YPSENUM eq <2>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if YPSENUM eq <3>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if YPSENUM eq <4>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]


```

3 = [NES3NAME] [NES3CITY] [NES3STAT]
4 = [NES4NAME] [NES4CITY] [NES4STAT]
[endif]
[if YPSENUM eq <5>]
1 = [NES1NAME] [NES1CITY] [NES1STAT]
2 = [NES2NAME] [NES2CITY] [NES2STAT]
3 = [NES3NAME] [NES3CITY] [NES3STAT]
4 = [NES4NAME] [NES4CITY] [NES4STAT]
5 = [NES5NAME] [NES5CITY] [NES5STAT]
[endif]
[if NENEWSCH eq <1>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
[endif]
[if NENEWSCH eq <2>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
[endif]
[if NENEWSCH eq <3>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
[endif]
[if NENEWSCH eq <4>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
[endif]
[if NENEWSCH eq <5>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
[endif]
[if NENEWSCH eq <6>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
[endif]
[if NENEWSCH eq <7>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
[endif]
[if NENEWSCH eq <8>]

```

6 = [NES6NAME] [NES6CITY] [NES6STAT]
 7 = [NES7NAME] [NES7CITY] [NES7STAT]
 8 = [NES8NAME] [NES8CITY] [NES8STAT]
 9 = [NES9NAME] [NES9CITY] [NES9STAT]
 10 = [NES10NAM] [NES10CIT] [NES10STA]
 11 = [NES11NAM] [NES11CIT] [NES11STA]
 12 = [NES12NAM] [NES12CIT] [NES12STA]
 13 = [NES13NAM] [NES13CIT] [NES13STA]
 [endif]

You got your [NEL_FL4] from what institution?

INTERVIEWER: ENTER THE NUMBER FOR THE SCHOOL AWARDING THE DEGREE.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4ED4

Date degree awarded-4

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4EMJ4R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What was your major or program of study for your [NEL_FL4] at [NEL_PRG4]?

F5 = DOUBLE MAJOR

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4EDMJ4

Double major indicator - deg 4

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4EMJ4P

What is/was your primary major or program of study?

F4EMJ4P

What is/was your secondary major?

(F4EMJ4S)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4EMJ4S

Secondary major-4th

See F4EMJ4P for description.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4EMJ4CD

Major/field of study code-4

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ4V

Major 4th - verbatim string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ4C

Major-4th - standard string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDGR5

[if NEL_ONE eq <1>]

What other degrees or certificates did you receive from [NELSTSCH]?

[else]

What other degrees or certificates, if any, do you have?

[endif]

ENTER 0 FOR NO MORE.

1 = Certificate

2 = Associate's Degree

3 = Bachelor's Degree

4 = Master's Degree

5 = Ph.D. or equivalent (E.G., ED.D., D.P.H.)

6 = Professional doctorate (M.D., J.D., L.L.B., D.D.S. ETC.)

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPGR5

[if YPSENUM eq <1>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if YPSENUM eq <2>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if YPSENUM eq <3>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if YPSENUM eq <4>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if YPSENUM eq <5>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

```

[endif]
[if NENEWSCH eq <1>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
[endif]
[if NENEWSCH eq <2>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
[endif]
[if NENEWSCH eq <3>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
[endif]
[if NENEWSCH eq <4>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
[endif]
[if NENEWSCH eq <5>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
[endif]
[if NENEWSCH eq <6>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
[endif]
[if NENEWSCH eq <7>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
[endif]
[if NENEWSCH eq <8>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
13 = [NES13NAM] [NES13CIT] [NES13STA]

```

[endif]

You got your [NEL_FL5] from what institution?

INTERVIEWER: ENTER THE NUMBER FOR THE SCHOOL AWARDING THE DEGREE.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ED5

Date degree awarded-5

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ5R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What was your major or program of study for your [NEL_FL5] at [NEL_PRG5]?

F5 = DOUBLE MAJORS

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDMJ5

Double major indicator - deg 5

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ5P

What is/was your primary major or program of study?

F4EMJ5P

What is/was your secondary major?

(F4EMJ5S)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ5S

Secondary major-5th

See F4EMJ5P for description.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ5CD

Major/field of study code-5

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ5V

Major 5th - verbatim string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ5C

Major-5th - standard string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDGR6

[if NEL_ONE eq <1>]

What other degrees or certificates did you receive from [NELSTSCH]?

[else]

What other degrees or certificates, if any, do you have?

[endif]

ENTER 0 FOR NO MORE.

1 = Certificate

2 = Associate's Degree

3 = Bachelor's Degree

4 = Master's Degree

5 = Ph.D. or equivalent (E.G., ED.D., D.P.H.)

6 = Professional doctorate (M.D., J.D., L.L.B., D.D.S. ETC.)

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPGR6

[if YPSENUM eq <1>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

[endif]

[if YPSENUM eq <2>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

[endif]

[if YPSENUM eq <3>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

[endif]

[if YPSENUM eq <4>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

[endif]

[if YPSENUM eq <5>]

1 = [NES1NAME] [NES1CITY] [NES1STAT]

2 = [NES2NAME] [NES2CITY] [NES2STAT]

3 = [NES3NAME] [NES3CITY] [NES3STAT]

4 = [NES4NAME] [NES4CITY] [NES4STAT]

5 = [NES5NAME] [NES5CITY] [NES5STAT]

[endif]

[if NENEWSCH eq <1>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

[endif]

[if NENEWSCH eq <2>]

6 = [NES6NAME] [NES6CITY] [NES6STAT]

7 = [NES7NAME] [NES7CITY] [NES7STAT]

```

[endif]
[if NENEWSCH eq <3>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
[endif]
[if NENEWSCH eq <4>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
[endif]
[if NENEWSCH eq <5>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
[endif]
[if NENEWSCH eq <6>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
[endif]
[if NENEWSCH eq <7>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
[endif]
[if NENEWSCH eq <8>]
6 = [NES6NAME] [NES6CITY] [NES6STAT]
7 = [NES7NAME] [NES7CITY] [NES7STAT]
8 = [NES8NAME] [NES8CITY] [NES8STAT]
9 = [NES9NAME] [NES9CITY] [NES9STAT]
10 = [NES10NAM] [NES10CIT] [NES10STA]
11 = [NES11NAM] [NES11CIT] [NES11STA]
12 = [NES12NAM] [NES12CIT] [NES12STA]
13 = [NES13NAM] [NES13CIT] [NES13STA]
[endif]
You got your [NEL_FL6] from what institution?
INTERVIEWER: ENTER THE NUMBER FOR THE SCHOOL AWARDING THE DEGREE.
Applies to: Respondents with postsecondary education experience since
last contact who earned a degree.
Sources: NEL:88/2000 Full Scale CATI/CAP
F4ED6
Date degree awarded-6

```

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ6R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What was your major or program of study for your

[NEL_FL6] at [NEL_PRG6]?

F5 = DOUBLE MAJORS

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EDMJ6

Double major indicator - deg 6

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ6P

What is/was your primary major or program of study?

F4EMJ6P

What is/was your secondary major?

(F4EMJ6S)

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ6S

Secondary major-6th

See F4EMJ6P for description.

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ6CD

Major/field of study code-6

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ6V

Major 6th - verbatim string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EMJ6C

Major-6th - standard string

Applies to: Respondents with postsecondary education experience since last contact who earned a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EGRD

[if F4ELST It <0> and YPSENUM It <0>]

When you attended your last school, what were your grades (or cumulative GPA)?

[else]

[if NEL_GRA eq <1>]

When you attended [NESCHOOL] as an undergraduate
what were your grades (or cumulative GPA)?

[else]

When you attended [NESCHOOL] what were your grades
(or cumulative GPA)?

[endif]

[endif]

1 = MOSTLY A'S (GPA 3.75 AND ABOVE ON 4.0 SCALE)

2 = A'S AND B'S (3.25 - 3.74)

3 = MOSTLY B'S (2.75 - 3.24)

4 = B'S AND C'S (2.25 - 2.74)

5 = MOSTLY C'S (1.75 - 2.24)

6 = C'S AND D'S (1.25 - 1.74)

7 = MOSTLY D'S OR BELOW (LESS THAN 1.25)

8 = PASS/FAIL

9 = SCHOOL DOESN'T AWARD GRADES

Applies to: Respondents with postsecondary education experience since
last contact at 2 or 4 year schools.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ESTEM

While attending [NESCHOOL] did you consider yourself
primarily a student or primarily employed?

1 = STUDENT

2 = EMPLOYED

Applies to: Respondents with postsecondary education experience since
last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EREAS4

What was your primary reason for enrolling
in [NESCHOOL]? Did you attend...

1 = to obtain job skills that do not require a degree
or certificate,

2 = to obtain a degree or certificate,

3 = to transfer to another school, or

4 = personal enrichment?

Applies to: Respondents with postsecondary education experience since
last contact at only less than 4 year schools.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELV1

You told me earlier that you are no longer enrolled in any school
and that you did not obtain a degree or certificate. Why did you
leave school?

ENTER CODES IN THE ORDER MENTIONED; ENTER 0 FOR NO MORE.

1 = DONE TAKING THE DESIRED CLASSES

2 = FINANCIAL REASONS

3 = CHANGE IN FAMILY STATUS (E.G., MARRIAGE, BABY,
DEATH IN FAMILY)

4 = PERSONAL PROBLEMS/INJURY/ILLNESS/CONFLICTS
WITH DEMANDS AT HOME

5 = ACADEMIC PROBLEMS

6 = NOT SATISFIED WITH PROGRAM/SCHOOL/CAMPUS/FACULTY

7 = CLASSES NOT AVAILABLE/CLASS SCHEDULING NOT CONVENIENT

8 = JOB/MILITARY CONSIDERATIONS

9 = MOVED FROM THE AREA

10 = DECIDED TO TAKE TIME OFF FROM STUDIES

11 = ENROLLMENT DOESN'T SUIT LIFESTYLE/BOREDOM WITH SCHOOL

12 = SCHOOL/PROGRAM CLOSED/LOST ACCREDITATION

13 = OTHER F4ELV1 (F4ELV2) (F4ELV3)

Applies to: Respondents with postsecondary education experience since last contact but not currently enrolled and without a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELV2

Why left school before degree-2

See F4ELV1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact but not currently enrolled and without a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELV3

Why left school before degree-3

See F4ELV1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents with postsecondary education experience since last contact but not currently enrolled and without a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELVS1

VERBATIM RESPONSE: REASON FOR LEAVING

SPECIFY FIRST OTHER REASON PROVIDED

F4ELVS1

SPECIFY SECOND OTHER REASON PROVIDED

(F4ELVS2)

SPECIFY THIRD OTHER REASON PROVIDED

(F4ELVS3)

Applies to: Respondents indicating "other specify" to reasons for leaving school without earning a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELVS2

Why left school before degree, specify 2

See F4ELVS1 for description.

Applies to: Respondents indicating "other specify" to reasons for leaving school without earning a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ELVS3

Why left school before degree, specify 3

See F4ELVS1 for description.

Applies to: Respondents indicating "other specify" to reasons for leaving school without earning a degree.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EYRPSE

Adding up all of the courses you have taken in postsecondary education, how many years of full-time coursework have you completed?

1 = Less than a year of full time credit

2 = One year of full time credit

3 = More than one year but less than two

4 = Two years of full time credit
 5 = More than 2 years of full time credit
 Applies to: Respondents with postsecondary education experience since last contact but not currently enrolled and without a degree.
 Sources: NELS:88/2000 Full Scale CATI/CAPI
 F4ETKOFF
 [if NEL_ONE eq <1>]
 As a student at [NELSTSCH],
 [else]
 As a student in a college or trade school after high school,
 [endif]
 [if F4AACTV eq <1> or F4AACTG eq <1>]
 have you ever:
 ENTER 1 = YES AND 2 = NO FOR FOLLOWING ELEMENTS
 Taken off more than 6 months from school?
 (Do not include time off after finishing hs or another degree)
 [else]
 did you ever:
 ENTER 1 = YES AND 2 = NO FOR FOLLOWING ELEMENTS
 Take off more than 6 months from school?
 (Do not include time off after finishing HS or another degree)
 [endif]
 F4ETKOFF
 [if F4AACTV eq <1> or F4AACTG eq <1>]
 Attended less than full time?.....
 [else]
 Attend less than full time?.....
 [endif]
 (F4EPARTT)
 [if F4AACTV eq <1> or F4AACTG eq <1>]
 [if NEL_ONE eq <0>]
 Transferred credits?.....
 [endif]
 [else]
 [if NEL_ONE eq <0>]
 Transfer credits?.....
 [endif]
 [endif]
 (F4ETRANS)
 [if F4AACTV eq <1> or F4AACTG eq <1>]
 [if NEL_ONE eq <0>]
 Attended more than one institution at the same time?.....
 [endif]
 [else]
 [if NEL_ONE eq <0>]
 Attend more than one institution at the same time?.....
 [endif]
 [endif]
 (F4EINSTS)
 [if F4AACTV eq <1> or F4AACTG eq <1>]
 Changed majors?.....
 [else]
 Change majors?.....

[endif]

(F4ECHMAJ)

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPARTT

Undergraduate activity-attend part time

See F4ETKOFF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ETRANS

Undergraduate activity-transfer credit

See F4ETKOFF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who attended more than one postsecondary school.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EINSTS

Undergraduate activity-multiple PSE

See F4ETKOFF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact who attended more than one postsecondary school.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ECHMAJ

Undergraduate activity-change major

See F4ETKOFF for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EJOBS

For the next set of items, please answer yes or no for each.

Would you say that your schooling after high school has...

1 = YES, 2 = NO

provided you with opportunities for better jobs than

you could have gotten had you not attended?.....F4EJOBS

allowed you to earn higher salaries?.....(F4EHSAL)

enabled you to take on more responsibility on the job?... (F4ERESP)

resulted in more opportunities for promotion?.....(F4EPROM)

improved your performance at your

[if F4AEMPL eq <1>]

current job?.....

[else]

former job?.....

[endif]

(F4EPRF)

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EHSAL

PSE impact-higher salary See
F4EJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since
last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4ERESP

PSE impact-more responsibility
See F4EJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since
last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EPROM

PSE impact-promotion opportunity
See F4EJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since
last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EPERF

PSE impact-job performance
See F4EJOBS for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with postsecondary education experience since
last contact.

Sources: NELS:88/2000 Full Scale CATI/CAPI
F4EASP

When you are age 30, what level of education
do you plan to hold?

IF RESPONDENT PLANS TO SEEK NO ADDITIONAL EDUCATION,
GIVE CURRENT EDUCATION LEVEL:

[if NEL_LEVEL eq <0>]

NO DEGREE

[else][if NEL_LEVEL eq <1>]

CERTIFICATE/DIPLOMA

[else]

[if NEL_LEVEL eq <2>]

ASSOCIATE'S DEGREE

[else]

[if NEL_LEVEL eq <3>]

BACHELOR'S DEGREE

[else]

[if NEL_LEVEL eq <4>]

MASTER'S DEGREE

[endif]

[endif]

[endif]

[endif][endif]

SELECT HIGHEST LEVEL OF EDUCATION EXPECTED

[if F4DHSFIN ne <1> and F4DHSFIN ne <>]

0 = NO FURTHER EDUCATION PLANNED/NO HIGHER DEGREE ANTICIPATED
 1 = EARN A HS EQUIVALENCY DEGREE (GED) OR CERTIFICATE
 2 = FINISH HIGH SCHOOL WITH A REGULAR DIPLOMA
 3 = VOCATIONAL, TRADE OR BUSINESS SCHOOL (AFTER HS AND NOT FOR MBA)
 4 = LESS THAN TWO YEARS OF COLLEGE
 5 = TWO OR MORE YEARS OF COLLEGE (INCLUDING ASSOCIATE'S DEGREE)
 6 = BACHELOR'S DEGREE/FINISH COLLEGE
 7 = POST-BACCALAUREATE CERTIFICATE
 8 = MASTER'S DEGREE OR EQUIVALENT
 9 = PH.D. OR EQUIVALENT
 10 = M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT
 [else]
 [if NEL_LEVEL eq <1>]
 0 = NO FURTHER EDUCATION PLANNED/NO HIGHER DEGREE ANTICIPATED
 3 = VOCATIONAL, TRADE OR BUSINESS SCHOOL (AFTER HS AND NOT FOR MBA)
 4 = LESS THAN TWO YEARS OF COLLEGE
 5 = TWO OR MORE YEARS OF COLLEGE (INCLUDING ASSOCIATE'S DEGREE)
 6 = BACHELOR'S DEGREE/FINISH COLLEGE
 7 = POST-BACCALAUREATE CERTIFICATE
 8 = MASTER'S DEGREE OR EQUIVALENT
 9 = PH.D. OR EQUIVALENT
 10 = M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT
 [else]
 [if NEL_LEVEL eq <2>]
 0 = NO FURTHER EDUCATION PLANNED/NO HIGHER DEGREE ANTICIPATED
 5 = TWO OR MORE YEARS OF COLLEGE (INCLUDING ASSOCIATE'S DEGREE)
 6 = BACHELOR'S DEGREE/FINISH COLLEGE
 7 = POST-BACCALAUREATE CERTIFICATE
 8 = MASTER'S DEGREE OR EQUIVALENT
 9 = PH.D. OR EQUIVALENT
 10 = M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT
 [else]
 [if NEL_LEVEL eq <3>]
 0 = NO FURTHER EDUCATION PLANNED/NO HIGHER DEGREE ANTICIPATED
 6 = BACHELOR'S DEGREE/FINISH COLLEGE
 7 = POST-BACCALAUREATE CERTIFICATE
 8 = MASTER'S DEGREE OR EQUIVALENT
 9 = PH.D. OR EQUIVALENT
 10 = M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT
 [else]
 [if NEL_LEVEL eq <4>]
 0 = NO FURTHER EDUCATION PLANNED/NO HIGHER DEGREE ANTICIPATED
 8 = MASTER'S DEGREE OR EQUIVALENT
 9 = PH.D. OR EQUIVALENT
 10 = M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT
 [else]
 [if F4DHSFIN eq <1> or (YHSGRAD ge <1> and YHSGRAD le <3>)]
 0 = NO FURTHER EDUCATION PLANNED/NO HIGHER DEGREE ANTICIPATED
 3 = VOCATIONAL, TRADE OR BUSINESS SCHOOL (AFTER HS AND NOT FOR MBA)

4 = LESS THAN TWO YEARS OF COLLEGE
 5 = TWO OR MORE YEARS OF COLLEGE (INCLUDING ASSOCIATE'S DEGREE)
 6 = BACHELOR'S DEGREE/FINISH COLLEGE
 7 = POST-BACCALAUREATE CERTIFICATE
 8 = MASTER'S DEGREE OR EQUIVALENT
 9 = PH.D. OR EQUIVALENT
 10 = M.D., L.L.B., J.D., D.D.S. OR EQUIVALENT

[endif]

[endif]

[endif]

[endif]

[endif]

[endif]

Applies to: Respondents who have not already achieved an academic or professional doctorate.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EVTYPE

What type of certificate, diploma, or degree
 do you expect to receive?

SELECT SINGLE DIPLOMA OR CERTIFICATE TYPE

0 = NO CERTIFICATE, DEGREE, LICENSE OR DIPLOMA EXPECTED

1 = CERTIFICATE, DIPLOMA, OR LICENSE FROM LESS THAN 2-YEAR
 VOCATIONAL OR OCCUPATIONAL PROGRAM

2 = DEGREE OR DIPLOMA FROM 2- OR 3-YEAR VOCATIONAL/OCCUPATIONAL
 PROGRAM (NOT INCLUDING ASSOCIATE'S DEGREE)

3 = ASSOCIATE'S DEGREE FROM 2- OR 3-YEAR VOCATIONAL/
 TECHNICAL PROGRAM

4 = ASSOCIATE'S DEGREE FROM 2- OR 3-YEAR ACADEMIC
 PROGRAM

Applies to: Respondents who aspire to complete less than a bachelors
 degree by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4E30R

INTERVIEWER: BE ALERT FOR DOUBLE MAJORS.

What major or program of study do you plan for your [NEI_ADV]??

F5 = DOUBLE MAJORS

Applies to: Respondents who aspire to complete a bachelors degree or
 higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4EDM30

Double major indicator - deg 1

Note: "No" response recoded from 2 to 0.

Applies to: Respondents who aspire to complete a bachelors degree or
 higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4E30P

What is/was your primary major or program of study?

F4E30P

What is/was your secondary major?

(F4E30S)

Applies to: Respondents who aspire to complete a bachelors degree or
 higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4E30S

Secondary major-1st

See F4E30P for description.

Applies to: Respondents who aspire to complete a bachelors degree or higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E30CD

Major - code 6th

Applies to: Respondents who aspire to complete a bachelors degree or higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E30V

Major for degree at age 30 - verbatim

Applies to: Respondents who aspire to complete a bachelors degree or higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4E30C

Major for degree at age 30 - standard string

Applies to: Respondents who aspire to complete a bachelors degree or higher by age 30.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4EPLAN

[if NEI_EDNX eq <1>]

You just told me you don't desire a higher degree or certificate. But do you plan to take courses toward another degree or certificate in the year 2001 (January - December, 2001)?

[else]

Do you plan to take courses towards a degree or certificate in the year 2001 (January - December, 2001)?

[endif]

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FAEQRY

Excluding all job-related training, high school, college, and vocational or technical school experiences you have already told me about, have you participated in any other classes or courses during the last 12 months?

(These classes would include continuing education courses, aerobics or fitness classes, life-long learning, correspondence courses, television and other distance education classes not leading to a degree.)

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FCED

During the last 12 months, have you taken...

1 = YES 2 = NO

continuing education classes or courses and credit or non-credit courses?.....F4FCED
 (This might include aerobics or fitness classes, cooking or ceramics courses, or writing and language classes at a local school or community college.)
 correspondence courses by mail or telephone?.....(F4FCOR)
 distance education courses by videotape, TV, radio, or satellite?.. (F4FMED)
 computer-based courses on video-disk, CD-ROM, or the Internet?..... (F4FCMP)
 any other type of adult education (including tutoring and private instruction)?.....(F4FOTH) Note:
 "No" response recoded from 2 to 0.

Applies to: Respondents with adult education in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FCOR

Adult education-correspondence courses

See F4FCED for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with adult education in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FMED

Adult education-distance ed by TV, radio

See F4FCED for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with adult education in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FCMP

Adult education-computer-based courses

See F4FCED for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with adult education in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FOTH

Adult education-other types of courses

See F4FCED for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with adult education in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FAEYR

Received training in past 12 mos

Note: "No" response recoded from 2 to 0.

Applies to: Respondents with adult education in the last 12 months.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4FOTHSP

OTHER TYPE OF ADULT EDUCATION (SPECIFY)

Applies to: Respondents indicating "other specify" for type of adult education.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GMRS

Next, I'm going to ask you a few questions about your family life.

What is your current marital status?

1 = SINGLE, NEVER MARRIED

2 = MARRIED

3 = DIVORCED

4 = SEPARATED

5 = WIDOWED

6 = PARTNER, SIGNIFICANT OTHER, NOT MARRIED, BUT IN A MARRIAGE-LIKE RELATIONSHIP

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNMRG

Have you been married more than once?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Married respondents without preloaded evidence of more than one marriage.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GMRGCT

How many times have you been married?

RANGE: 2-10

Applies to: Respondents indicating more than one marriage.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GMREND

Did your first marriage end in a ...

READ AS NECESSARY.

1 = divorce or annulment

2 = PERMANENT OR LEGAL SEPARATION

3 = DEATH

Applies to: Respondents no longer married to first spouse.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GFMY

First marriage date

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents indicating marriage.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GMMY

Current marriage date

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents indicating more than one marriage.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNSP

PERSONS RESPONDENT CURRENTLY LIVES WITH
RELATIONSHIP TO RESPONDENT NUMBER IN HOUSEHOLD
SPOUSE F4GNSP

PARTNER (SIGNIFICANT OTHER/MARRIAGE-LIKE) (F4GNPRT)

CHILDREN / STEPCHILDREN (F4GNCHD)

PARENTS, STEPPARENTS, GUARDIANS (F4GNGRD)

BROTHERS, AND SISTERS (F4GNSIB)

IN-LAWS, GRANDPARENTS, OTHER RELATIVES (F4GNREL)

NONRELATIVES (FRIENDS, BOY/GIRL FRIENDS) (F4GNUNR)

ENTER F9 WHEN SCREEN IS COMPLETE.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNPRT

Household number-partner

See F4GNSP for description.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNCHD

Household number-children/stepchildren

See F4GNSP for description.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNGRD

Household number-parents/guardians

See F4GNSP for description.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNSIB

Household number-brothers and sisters

See F4GNSP for description.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNREL

Household number-inlaws, other relatives

See F4GNSP for description.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNUNR

Household number-nonrelatives, friends

See F4GNSP for description.

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GHSUM

Household number-total

Applies to: Respondents who agreed to tell who lives in their household.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GPART

You mentioned that you were unmarried and living with a nonrelative, would you consider this person your partner or significant other?

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Unmarried respondents not reporting a partner but living with a non-relative.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNDP

Now I would like to get some information about your current dependents. Excluding yourself,

[if F4GMRS eq <2>]

and excluding your spouse,

[else]

[if F4GMRS eq <6> or F4GPART eq <1> or F4GNPRT eq <1>]

and excluding your partner,

[endif]

[endif]

how many dependents do you currently support?

A DEPENDENT IS A PERSON FOR WHOM THE RESPONDENT PAYS AT LEAST HALF OF THEIR EXPENSES (FOOD, SHELTER, CLOTHING, HEALTH CARE, AND SCHOOLING).

THIS MAY INCLUDE THE RESPONDENT'S CHILDREN, PARENTS, AND OTHERS.

NOTE: THE DEPENDENT DOES NOT HAVE TO LIVE WITH THE RESPONDENT.

RANGE (0-20):

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNDC

How many of the [F4GNDP] dependents you mentioned,

[if F4GMRS eq <1> and (F4GMRS ne <2> and F4GMRS ne <6>)]

if any,

[endif]

are children?

A DEPENDENT IS PERSON FOR WHOM THE RESPONDENT PAYS AT LEAST HALF OF THEIR EXPENSES (FOOD, SHELTER, CLOTHING, HEALTH CARE, AND SCHOOLING). DEPENDENT CHILDREN CAN INCLUDE CHILDREN BORN TO RESPONDENT, ADOPTED, FOSTER-CARE AND STEPCHILDREN, REGARDLESS OF WHETHER OR NOT THEY CURRENTLY LIVE WITH RESPONDENT.

INTERVIEWER: RECORD NUMBER OF DEPENDENT CHILDREN

RANGE (0-[F4GNDP]):

Applies to: Respondents with dependents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GNCH

How many children of your own,

[if F4GMRS eq <1> and F4GMRS ne <2> and F4GMRS ne <6>]

if any,

[endif]

have you had?

INTERVIEWER: IN THIS CASE, CHILDREN MUST BE "NATURAL" OR "BIOLOGICAL" CHILDREN (i.e., BORN TO RESPONDENT).

ENTER "0" IF NONE.

INTERVIEWER: RECORD NUMBER OF CHILDREN

RANGE (0-10):

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4GCH1

Date first child born

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with children.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4GCH2

Date last child born

Note: Date format is YYYYMM. If no month was given, the month is documented as 00.

Applies to: Respondents with more than one child.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4HI99

First, including all of the wages, salaries, and commissions you earned in 1999, about how much did you earn from employment before taxes and all other deductions?

ANNUAL EARNINGS (\$0.00-\$500,000.00):

Applies to: Respondents who worked in 1999.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4HINCS

[if F4BJST lt <1999> and F4BJST ne <-1> and F4BJST ne <-2> and F4BJST ne <>]

You reported earlier that you did not work for pay during 1999.

How much did your

[else]

Next, about how much did your

[endif]

[if F4GMRS eq <2>]

spouse

[else]

[if F4GMRS eq <6> or F4GPART eq <1> or F4GNPRT eq <1>]

partner

[endif]

[endif]

earn from employment

before taxes and all other deductions in 1999?

Please include all wages, salaries, and commissions.

ANNUAL EARNINGS (\$0.00-\$500,000.00):

Applies to: Respondents with spouse or partner.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4HINCO

[if (F4BWKSWK eq <0> or F4BWKSWK eq <>) and F4GMRS ne <2> and F4GMRS ne <6> and F4GPART ne <1> and F4GNPRT ne <1>]

You reported earlier that you did not work for pay during 1999.

Approximately, how much did you

[else]

Without considering the 1999 earnings from employment that you just reported, approximately how much did you

[endif]

[if F4GMRS eq <2>]

and your spouse

[else][if F4GMRS eq <6> or F4GPART eq <1> or F4GNPRT eq <1>]

and your partner

[endif][endif]

[if F4GMRS eq <2> or F4GMRS eq <6> or

F4GPART eq <1> or F4GNPRT eq <1>]

receive from other sources of income in 1999?

[else][if F4BWKSWK eq <0> and F4GMRS ne <2> and F4GMRS ne <6>
and F4GPART ne <1> and F4GNPRT ne <1>]
receive from other sources of income in 1999?

[else]

receive from other sources of income in 1999?

[endif][endif]

(These sources might include stocks and bonds, savings
interest, insurance, alimony or child support, family
members, and disability payments.)

AMOUNT (range: \$0 - \$500,000):

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HI98

The next two questions ask about your earnings
in the two previous years.

First, I would like you to think back to 1998.

Please tell me about how much you earned from employment
before taxes and all other deductions in 1998.

[if F4HI99 gt <0>]

NOTE: 1999 INCOME = \$[F4HI99]

[ENDIF]

ANNUAL EARNINGS (\$0.00-\$500,000.00):

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4H98IN

Annual income in 98

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HI97

[if F4BJST lt <1999> and F4BJST ne <-1> and F4BJST ne <-2>
and F4BJST ne <>]

The next question asks about your earnings
in 1997.

[else]

Now I would like you to think back one more year
to 1997.

[endif]

At that time, how much did you earn from employment
before taxes and all other deductions?

[if F4HI99 gt <0>]

NOTE: 1999 INCOME = \$[F4HI99]

[ENDIF]

[IF F4HI98 gt <0>]

NOTE: 1998 INCOME = \$[F4HI98]

[endif]

ANNUAL EARNINGS (\$0.00-\$500,000.00):

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4H97IN

Annual income in 97

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HPOVTH

Poverty threshold

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HAIDR

During 1999, did you

[if F4GMRS eq <2>]

or your spouse

[else]

[if F4GMRS eq <6> or F4GPART eq <1> or F4GNPRT eq <1>]

or your partner

[endif]

[endif]

receive any type of welfare or public assistance for housing,
food, medical, or living expenses?

(For example, this might be food stamps, Temporary Assistance
for Needy Families, AFDC, public housing or housing assistance
from government, or Medicaid.)

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents below predetermined poverty threshold based
on income and dependents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HFDST

What types of public assistance did you receive during 1999?

Did you receive...

INTERVIEWER: 1 = YES 2 = NO

Food stamps.....F4HFDST

Temporary Assistance for Needy Families or AFDC.....(F4HTANF)
(ALSO CALLED "TAN-F,")

Housing assistance or public housing.....(F4HHOUS)

Medicaid or other public program for medical expenses..(F4HMCDD)

Other types of public assistance or welfare.....(F4HOTHRS)

SPECIFY: (F4HOTHRS)

Note: "No" response recoded from 2 to 0.

Applies to: Respondents receiving welfare or public assistance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HTANF

Public assistance-TANF

See F4HFDST for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents receiving welfare or public assistance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HHOUS

Public assistance-housing

See F4HFDST for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents receiving welfare or public assistance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HMCDD

Public assistance-Medicaid

See F4HFDST for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents receiving welfare or public assistance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HOTH

Public assistance-other

See F4HFDST for description.

Note: "No" response recoded from 2 to 0.

Applies to: Respondents receiving welfare or public assistance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HOTH

Public assistance-other specify

See F4HFDST for description.

Applies to: Respondents receiving welfare or public assistance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4HHOUSE

With regard to your current housing status,

do you

[if F4GMRS eq <2>]

and your spouse...

[else][if F4GMRS eq <6> or F4GPART eq <1> or F4GNPRT eq <1>]

and your partner...

[else]

...

[endif][endif]

1 = own your living quarters (INCLUDE THOSE "BUYING HOME"),

2 = rent from someone who is not a relative,

3 = rent from a relative, or

4 = live in a residence without paying rent?

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IMAGS

Next I want to ask a few questions about what you have been doing outside of work and school.

Please tell me how many days in a typical 7-day week you did them.

RANGE: 0 (NEVER), 99 (LESS THAN ONE), 1-7 DAYS PER WEEK

In the past 12 months, how many days in a typical week did you...

read newspapers or magazines.....F4IMAGS

read books.....(F4IBOOKS)

use a computer at home.....(F4ICOMPT)

use the Internet to get information, not including

use at work or school.....(F4IINET)

watch the news on TV.....(F4ITVNEW)

participate in physical fitness activities to

get in or stay in shape.....(F4IFITNS)

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IBOOKS

Integration-read books

See F4IMAGS for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ICOMPT

Integration-use computer at home

See F4IMAGS for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4IINET

Integration-Internet for information

See F4IMAGS for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4ITVNEW

Integration-watch TV news

See F4IMAGS for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4IFITNS

Integration-physical fitness activities

See F4IMAGS for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4ILIBRY

Next, tell me how many days you did each of the following

activities in a typical 30-day month.

RANGE: 0 (NEVER), 99 (LESS THAN ONE), 1-30 DAYS PER MONTH

In the past year, how many days in a typical month did you...

visit a public library.....F4ILIBRY

go to a play, concert, or museum.....(F4ICULT)

participate in organized religious activities.....(F4IRELIG)

participate in group or team sports and recreation....(F4ISPORT)

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4ICULT

Integration-visit plays,concerts

See F4ILIBRY for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4IRELIG

Integration-organized religious activity

See F4ILIBRY for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4ISPORT

Integration-participated in sports

See F4ILIBRY for description.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAP

F4IYOUTH

For the next set of items, tell me if you did any of these

activities within the past 12 months. Please answer yes

or no for each of them. Did you...

1 = YES 2 = NO

IF REQUIRED FOR PROMPTING, RECALL PERIOD IS SINCE

[NIRECLMO], [NIRECLYR]

volunteer in a youth organization.....F4IYOUTH

volunteer in a civic or community organization.....(F4ICIVIC)

participate in a political campaign (by more than just voting).....(F4IPOLYL)

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ICIVIC

Integration-civic/community volunteer

See F4IYOUTH for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IPOLYL

Integration-political campaign

See F4IYOUTH for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IRVOTE

Are you currently registered to vote?

1 = YES

2 = NO

3 = INELIGIBLE TO VOTE

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IVPRE

[if F4IRVOTE ne <1>]

Even if you are not currently registered to vote, did

[else]

Did

[endif]

you vote in the 1996 presidential election?

1 = YES

2 = NO

F4IVPRE

[if F4IVPRE eq <1> or F4IVPRE eq <2> or F4IVPRE eq <-1> or F4IVPRE eq <-2>]

In the last 2 years, have you voted in any local, state, or national election?

1 = YES

2 = NO

(F4IVANY)

[endif]

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IVANY

Voted in any election in last 24 months

See F4IVPRE for description.

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IHINSQ

Are you covered by any type of health plan or health insurance, including those provided by your employer or others?

1 = YES

2 = NO

F4IHINSQ

[if F4IHINSQ eq <1>]

What is the source of your insurance coverage?

1. RESPONDENT'S EMPLOYER OR UNION (HEALTH PLAN FROM)

2. FAMILY MEMBER'S EMPLOYER OR UNION (HEALTH PLAN FROM)

3. PRIVATE HEALTH PLAN PURCHASED DIRECTLY BY
RESPONDENT OR FAMILY MEMBER

4. MEDICAID

5. OTHER (FOR EXAMPLE, CHAMPUS, CHAMPVA, VETERAN'S
ADMINISTRATION, A UNIVERSITY HEALTH SERVICE, HEALTH CARE
THROUGH THE MILITARY, AND THE INDIAN HEALTH SERVICE)

(F4IHINSQ)

[endif]

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IHINSQ

Type of health insurance

See F4IHINSQ for description.

Applies to: Respondents with health insurance.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4ISMOKE

As you may remember from earlier interviews, we are
interested in your alcohol and tobacco use. The
next questions ask about your smoking and drinking.
How many cigarettes, if any, do you usually smoke in
a day?

NOTE: A PACK HOLDS 20 CIGARETTES

0 = I DON'T SMOKE CIGARETTES

1 = LESS THAN ONE CIGARETTE A DAY

2 = 1-5 CIGARETTES A DAY

3 = ABOUT 1/2 PACK A DAY (ABOUT 10 CIGARETTES)

4 = MORE THAN 1/2 PACK AND LESS THAN 2 PACKS (11-39 CIGARETTES)

5 = 2 OR MORE PACKS A DAY (40+ CIGARETTES)

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IDRINK

On how many occasions, if any, during the last 30 days,
have you had any alcoholic beverages to drink?

RANGE (0-30):

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4IBINGE

In the last two weeks, how many times,
if any, have you had 5 or more alcoholic drinks
in a row (ON A SINGLE OCCASION)?

RANGE (0-10):

Applies to: Respondents with a drinking occasion in the last 30 days.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JHISP

We are almost finished. Next, I want to ask

about your race and ethnicity.

Are you Hispanic or Latino? (Are you of Spanish origin?)

RECORD 1 = YES, 2 = NO

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JRAC1

Please select one or more of the following choices

to best describe your race.

Are you "White", "Black or African American", "American Indian

or Alaska Native", "Asian", or "Native Hawaiian or other

Pacific Islander"?

ENTER CODES IN THE ORDER MENTIONED; ENTER 0 FOR NO MORE.

READ SLOWLY AND PAUSE BETWEEN RACES. IF INTERRUPTED WITH A
SINGLE RESPONSE, PROMPT WITH "ANY OTHERS?".

1 = WHITE

2 = BLACK OR AFRICAN AMERICAN

3 = AMERICAN INDIAN OR ALASKA NATIVE

4 = ASIAN

5 = NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER

F4JRAC1 (F4JRAC2) (F4JRAC3)

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JRAC2

Race description-2

See F4JRAC1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents indicating more than one race.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JRAC3

Race description-3

See F4JRAC1 for description.

Note: 0 responses were recoded as -3.

Applies to: Respondents indicating more than two races.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JTRIBE

Are you enrolled in a state- or federally-recognized tribe?

RECORD 1 = YES, 2 = NO

1 = YES

2 = NO

Note: "No" response recoded from 2 to 0.

Applies to: Respondents reporting race as American Indian or Alaska
Native.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JASIAN

INTERVIEWER: READ LIST

Are you...

1 = Asian Indian
 2 = Chinese
 3 = Filipino
 4 = Japanese
 5 = Korean
 6 = Vietnamese
 7 = or some other Asian?

F4JASIAN

[if F4JASIAN eq <7>]

OTHER SPECIFY:

[endif]

(F4JASPC)

Applies to: Respondents reporting race as Asian.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JASPC

Asian origin-specify

See F4JASIAN for description.

Applies to: Respondents indicating "other specify" Asian.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JRDVA

Next, I would like to ask you a couple questions about the racial and ethnic composition of your neighborhood and work.

Please tell me the approximate percentage of people in each

of the following that were the same race and ethnicity as you.

What percentage of the people... Range: 0-100%

in the neighborhood where you grew up were

the same race and ethnicity as you?.....F4JRDVA

in your present neighborhood (are the same race

and ethnicity as you)?.....(F4JRDVB)

in your [if F4AEMPL eq <1>] present [endif] [if F4AEMPL ne <1>]

most recent [endif]

workplace (are the same race and ethnicity as you)?.....(F4JRDVC)

Applies to: Respondents who provided their race.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JRDVB

Diversity in present neighborhood

See F4JRDVA for description.

Applies to: Respondents who provided their race.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JRDVC

Racial-ethnic in present workplace

See F4JRDVA for description.

Applies to: Respondents who provided their race.

Sources: NELS:88/2000 Full Scale CATI/CAPI

F4JZIP

Locator residence-zip specify

Applies to: All respondents.

Sources: NELS:88/2000 Full Scale CATI/CAPI

Appendix B

Chi-Square Tests

Variable	Value	<i>df</i>	Significance
Age	17.815	3	.000
Gender	1.005	1	.316
Race/Ethnicity	15.441	5	.009
Income	1.953	4	.744
Parents' Education	14.337	2	.001
Delayed Entry	1.584	8	.000
Part-time Enrollment	89.004	1	.000
Poverty Threshold	90.241	7	.000
Dependents	86.175	4	.000
Single Parent Status	.284	1	.594
Part-time Employment	7.202	1	.007