Occupational outcomes of bachelor's degrees earned by nontraditional students

Mary Ellen Ellyson Wacker

University of Northern Iowa

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OCCUPATIONAL OUTCOMES OF BACHELOR'S DEGREES
EARNED BY NONTRADITIONAL STUDENTS

An Abstract of a Thesis
Submitted
In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Mary Ellen Ellyson Wacker
University of Northern Iowa
August 1990
ABSTRACT

The purpose of this study was to ascertain the occupational outcomes of bachelor's degrees earned by individuals when they are 25 years or older, here called nontraditional graduates. The subjects of the study were 212 nontraditional graduates of the University of Northern Iowa. They were randomly selected from a list of individuals who received their college degrees from 1984 to 1988 and who were 25 years old or older at the time they graduated. A questionnaire was designed by the researcher that elicited information about the subjects' reasons for deciding to earn a college degree and about their past and current employment.

Responses were analyzed by comparing subjects' expectations of the earned degree with actual outcomes and by studying the occurrence of occupational mobility from pre-graduation jobs to post-graduation jobs. Data about UNI graduates' employment characteristics were compared with similar data collected in a national survey of graduates of all ages by the U. S. Department of Education.

It was expected that UNI nontraditional graduates would not find jobs after graduation that had higher socioeconomic status than the jobs they held before their
graduation. It was also expected that a lower proportion of UNI nontraditional graduates would find jobs within one year of graduation than graduates in the national sample and that it would be less likely that those jobs would be related to their college major and have opportunity for advancement than the jobs found by those in the national sample.

Results indicated that most of the UNI nontraditional graduates decided to earn a college degree primarily for occupational reasons, and most of them reported attaining the outcomes they expected to. In addition, most of the UNI graduates obtained post-graduation jobs with significantly higher status than the jobs they held before they earned a college degree. Overall, a greater proportion of them obtained jobs within a year of graduation than did graduates in the national study, and more UNI nontraditional graduates' jobs were related to their major fields of study and had career potential than jobs obtained by graduates of all ages in the national study.
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has been approved as meeting the thesis requirement for the Degree of Master of Arts

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I thank the members of my committee, Professor Jerry Stockdale, Professor Robert Claus, and Professor Stephen Fortgang, for their valuable help in preparing this thesis. I am especially grateful to Professor Stockdale for his kind reassurances and professional guidance during my frequent lapses of self-confidence.

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CHAPTER 1

Introduction

Wanting to "get ahead" and "be a success" is a common goal in America. Many Americans are socialized to want success, and they expect to achieve it. They believe that the United States is a land of opportunity where anyone can get ahead if he or she is ambitious enough, and the vehicle for upward mobility is education (VanFossen 1979, 269).

For most Americans, success takes the form of high income and status, and it is assumed to be the natural consequence of occupational achievement. People believe that higher education provides occupational opportunity and upward mobility for adults of all ages. This research examines whether this belief is warranted when college degrees are earned by individuals aged 25 years old or older.

Statement of the Problem

Many Americans believe that higher education provides occupational opportunity and upward mobility for adults who earn a college degree. Such faith in education is supported by social mobility research findings that occupation is the best indicator of socioeconomic success and that education is strongly correlated with
occupational opportunities (Blau and Duncan 1967; Featherman and Hauser 1978). Accordingly, adults of all ages become college students. In fact, people who are 25 years old or older represent a rapidly increasing proportion of college students (Kaufman 1986, 2; Stern and Chandler 1987, 124). Many of them expect their occupational lives to be improved following their college graduation (Griff 1987, 469; Aslanian and Brickell qtd. in Griff 1987, 469; Finnegan, Westefeld, and Elmore 1981, 69).

This study ascertains the occupational outcomes of bachelor's degrees earned by college students who graduate when they are 25 years old or older, hereafter called nontraditional graduates. The research consists of: (1) comparing what a sample of nontraditional graduates of the University of Northern Iowa (UNI) indicated were expected occupational outcomes of their bachelor's degrees with the actual outcomes, (2) comparing their pre-graduation jobs with post-graduation jobs in order to detect the occurrence of occupational mobility, and (3) comparing employment characteristics of UNI nontraditional graduates to similar characteristics of college graduates of all ages reported in a recent national survey conducted by the U. S. Department of Education (1987).

The research hypotheses were derived from social mobility theory that states that age has a weakening
effect on the relationship between educational achievement and occupational mobility. This finding may be interpreted in two ways. It suggests that over time the importance of a college degree on occupational achievement declines, referring to the gap between when the college degree was received and subsequent occupational activity. It also suggests that college degrees earned by older individuals might not help them overcome the occupational effects of their age such as reduced job opportunities. This research does not test the first interpretation. To do so would require a longitudinal research design in which respondents were asked questions over a period of time after they had earned their degrees. This research tests the second interpretation, that college degrees earned by individuals when they are 25 years old or more do not help that much in overcoming declining job opportunities due to age. This interpretation is consistent with evidence provided by Hutchens (1988) that older workers, because of their age, have fewer opportunities for jobs than younger workers.

The following hypotheses are made in regard to this study:

1. It is hypothesized that nontraditional graduates with work experience do not find jobs of higher status than the jobs they held before earning their college degrees.
2. It is hypothesized that a lower proportion of nontraditional graduates will have obtained jobs within one year of graduation than members of the overall graduate population.

3. It is hypothesized that a lower proportion of nontraditional graduates will perceive that their occupations are related to their major field of study than will members of the overall graduate population.

4. It is hypothesized that a lower proportion of nontraditional graduates will perceive their jobs as having career potential than will members of the overall graduate population.

Background Information

Basic to a study of occupational outcomes of college degrees is an understanding of how people have come to believe that higher education provides occupational opportunity and upward mobility for adults of all ages.

Work and occupation are powerful elements of American culture. As Havighurst and Friedman observe, an individual's job is the most direct measure of his or her economic worth. Work, more than any other thing, regulates how and where we spend our time. It is the most important source of self identity and the most important indicator of our social status. Our work greatly influences who we marry and who we will be friends with,
and it provides a frame of reference from which we interpret what happens in our lives (1954, 3-5).

Religious Influence

American attitudes about work and occupation have religious roots. Weber argues in *The Protestant Ethic and the Spirit of Capitalism* that the Calvinist emphasis on hard work, thrift, and deferred gratification profoundly affected American attitudes toward work and success (Collins 1986, 50-51). As Calvinists practiced their faith through hard work and thrift, they experienced an accumulation of earnings, an outcome that violated their belief in the sanctity of self-denial. They resolved the dilemma by re-investing the growing wealth back into their work or businesses. The effect was the creation of yet more work that provided additional opportunities to practice their faith.

But more important than its capacity to create more work, a holy endeavor in itself, increased capital, to the Calvinists, signified God's approval. Personal wealth indicated individual salvation, the ultimate success (Collins 1986, 51). The inevitable effect of such a belief, McKinley asserts, was a "strong focus on the economic institution and an emphasis on the maximization of individual success and 'productivity'" (1974, 42).
Economic Interpretation

Secular expression of Calvinist values was provided by utilitarian economists such as Adam Smith and John Locke who reinforced the idea that individuals should freely pursue their own interests (McKinley 1974, 43). They further emphasized the value of "rationality, free-enterprise, and hard work" (43), arguing that this approach to secular life would contribute to individual success as well as societal harmony, since competition between individuals would regulate social behavior.

Materialist Perspective

Marx was highly critical of the utilitarian focus on individuality, and he scorned religious teachings about work as ideological. As Berlin explains, Marx believed that under natural conditions, man's work is a reflection of man himself (1978, 93-94). Man labors because he must in order to produce the means of staying alive, but he also works because it is pleasurable. His production is possible because man has the unique ability to conceptualize the outcome of his labor before he begins his work and to create from nature that which he has conceptualized. This unique process, one which separates human beings from lower forms of animal life, is self-fulfilling: man affirms himself through what he has created (Zeitlan 1968, 86-87).
Marx believed that the natural relationship between man and his work was possible in earliest societies, but the relationship changed as societies evolved into more complex form. Economic surplus, the emergence of a division of labor, and the development of a class system re-directed man's struggle with nature to conflict with other human beings as they competed for control of and access to the surplus. Ultimately, individuals who came to control the means of production were in a position to control the labor of other men (Berlin 1978, 93-94).

Marx described conditions in capitalist societies in which workers who own nothing else are forced to sell their labor power to the owners of the means of production (Zeitlan 1968, 87). They are required to submit to a division of labor which separates the worker from conceptualization and creation and causes the worker to feel "outside his work, and in his work feels outside himself" (87). This "estrangement" (87) causes the worker to see himself as an object that becomes entwined in the competition for society's rewards.

Competition continues as the basis for historical struggles among people having differential social positions. Marx predicted that competition, which the utilitarians believed would harmonize social life, would ultimately lead to a class struggle that would destroy the social organization of capitalism (Coser 1977, 50).
Weber and Marx both acknowledge the central position of labor in human life. They both, however, offer distinct explanations for attitudes toward work. Weber shows how the ideas people have, such as those about religion, affect their social life. Marx, on the other hand, argues that materialism is the central determinant of all human life, affecting even ideas (Collins 1986, 47). Both perspectives provide relevant background for examining American attitudes and behavior toward work.

**Theoretical Foundation**

**Human Capital Theory**

According to Zeitlan (1968, 87) Marx explained that many workers since the Industrial Revolution face the necessity of selling their own labor power to the owners of the means of production, just as they would any other commodity. When workers objectify themselves in this way, they extend the traditional concept of capital to include not only material goods but human beings as well. Capital investments, therefore, can consist of techniques for improving the quality of their labor.

According to human capital theory, people see themselves and others as commodities that are suitable for investment in order to produce capital, usually money. Accordingly, people invest in themselves and others in order to improve their earning power, or, in the words of
labor economists, to "maximize their utility" (Fleisher and Kneisner 1984, 289).

The form of investment varies. Gary Becker, a prominent economic theorist in the area of human capital, defines investments in human capital as those "activities that influence future monetary and psychic income by increasing the resources in people" (1975, 9). Becker explains that human capital investments can consist of such things as medical care, on-the-job training, and formal schooling (9).

Human capital theorists particularly emphasize schooling as a major form of investment since it is widely believed that schooling develops resources in individuals that are valuable in the workplace (Schultz 1971, 38). For example, learned skills or personal habits like perseverance and dedication are resources that are developed in school and are valued by employers. They can be exchanged by the worker for higher wages than labor performed by workers lacking such attributes or resources. It is in the exchange between employees and employers of personal resources for wages that the investment of time and money in higher education pays off through higher income in the workplace (Reder 1972, 74).

A Conflict Explanation

Conflict theory focuses on the competition between individuals that is central to capitalism. Competition is
at the heart of capitalism, and it is firmly rooted in several aspects of higher education. Competition exists among individuals for acceptance into institutions and particular programs, for scholarships and grants, and for grades. But it is the competition that exists beyond college graduation into the occupational arena that motivates many individuals to invest in themselves by earning a college degree.

Most people today know that individuals without a college education are not able to effectively compete for the best jobs or even many of the mediocre jobs. Thus many people approach college rationally as a means to reposition themselves in the job market (Griff 1987, 469; Aslanian and Brickell qtd. in Griff 1987, 469; Finnegan, Westefeld, and Elmore 1981, 69).

This approach to higher education clarifies the connection between human capital theory and conflict theory. People invest in education for themselves and others in order to increase their value in the workplace and their competitiveness with other workers.

Of course, not all people who attend college do so for economic purposes. Moreover, people who do attend college primarily to improve their economic position also expect other outcomes such as "personal growth and development" (Bodensteiner 1989, 91). A discussion of the reasons students give for attending college is presented
later, but it is appropriate to mention at this time that there are exceptions to economic motives.

**Summary**

The above historical and theoretical analysis explains why people use education as a vehicle for occupational achievement and upward mobility. Religious and economic values shape our view that success means high earnings and status and results from hard work, deferred gratification, and capital investments. Competition for jobs causes people to objectify themselves, invest in themselves through education as they would in other forms of capital, and, they hope, increase their occupational opportunities and earning power. That is why people of all ages invest in college education for themselves and expect improved opportunities for success.

**Significance of the Study**

This study is significant because it differentiates occupational outcomes of bachelor's degrees according to age. It may be the first research to examine the effect of college degrees on occupational outcomes for nontraditional students. This is important because people across a wide range of ages, including an increasing numbers of nontraditional students, are represented on American colleges campuses. The research also represents a contribution to the literature because it tests the idea that higher education provides occupational opportunity
and resulting upward mobility as well for older adults as it does for adults of the traditional college age.

**Limitations**

This study examines the effect of college education on occupational mobility for nontraditional graduates. Other relevant variables which affect occupational mobility are not examined, such as structural conditions, personality traits, cognitive ability, or family background.

The study is further limited by the lack of a control group with which to compare findings. A control group might demonstrate changes in the socioeconomic status of workers without a college education. There are, however, comparisons made to college graduates in general.

Additionally, this study involves nontraditional graduates of the University of Northern Iowa. Results may not generalize to other populations, although attempts are made to establish representativeness. Differences could result from personal histories, the University milieu, or area occupational opportunities.

**Definition of Terms**

In this report, students who were 25 years of age or older at the time they received their undergraduate college degree are referred to as UNI nontraditional graduates. This term is not precise because "nontraditional" also refers to other students or programs
that have unique characteristics. It is used in this study, however, because it is the most common reference in the literature to students in this age group.

The term contrasts with the term college graduates overall which refers to all graduates of four-year colleges across the nation, including traditional and nontraditional graduates.
CHAPTER 2
Review of Related Literature

Two major areas of review are studies of social mobility and of the role of higher education in the occurrence of occupational mobility. The literature in these two areas is so vast that only selected major works are reviewed here.

Social Mobility

Researchers interested in social mobility and status attainment focus on occupation. This is because occupation is traditionally recognized as the primary vehicle for movement within the social structure (Blau and Duncan 1967, 425) and as a major determinant of individuals' position in the social strata (Duncan and Blau 1967, 6; Havighurst and Friedmann 1954, 3).

Earliest investigators, such as Peter M. Blau and Otis Dudley Duncan, sought to confirm the existence of opportunities for upward mobility within the American occupational structure. In 1962, Blau and Duncan conducted the Occupational Changes in a Generation (OCG) study in which they examined social mobility in approximately 20,000 men 20 to 64 years old (1967, 1). The authors confirmed that upward mobility is prevalent in American society and that it is normally achieved through
occupation (426-427). In fact, the authors stated that it is more likely that someone from the working class in America could move into the elite than in any other country (434)). It is this feature of American society, the authors point out, that perpetuates the "egalitarian ideology" (437).

In addition to their overall conclusions about mobility, Blau and Duncan identified a combination of ascribed variables and achieved variables that are associated with upward mobility. Among the variables studied were father's educational attainment and occupational status, respondent's educational attainment, status of respondent's first job, and status of respondent's occupation in 1962, the year of the survey (1967, 167).

As part of the study, Blau and Duncan hierarchically ranked occupations according to a scale that was based on average income and education in each occupation. (This is referred to as the Socioeconomic Index.) Then, through analyses of path diagrams, they calculated the correlation of each variable and occupational achievement. They concluded that "education exerts the strongest direct effect on occupational achievement" (1967, 403).

Blau and Duncan emphasized, however, that although these variables have a profound effect on occupational achievement, "social origin, education, and career
beginning account for somewhat less than half the variance in occupational achievement" (1967, 403). Other factors such as training and experience, ethnic background, and migration also have great impact on occupational success.

The most significant point for the current study is the researchers' finding that the power of social origin, career beginning, and education in influencing occupational achievement declines in importance with individuals' age. Specifically, Blau and Duncan found that the influence of education weakens from a path coefficient of .40 at age 30 to .06 at age 60 (1967, 403). However, the influence of such factors as training and experience increases with age.

In 1973, Featherman and Hauser replicated the Blau and Duncan OCG survey in order to examine whether the chances for upward mobility were as available structurally in 1973 as they were in 1962, the year of the Blau and Duncan study. Featherman and Hauser's findings are based on responses from 33,600 males randomly surveyed by a mail questionnaire (1978, 7).

Since their study was a replication, the researchers employed the same occupational scale that was used by Blau and Duncan. Featherman and Hauser also re-examined the same variables in comparison with their new data. Their findings established that chances for occupational
advancement in America were about the same as Blau and Duncan's earlier findings.

The Featherman and Hauser study re-emphasized the importance of education in "allocating men to occupational positions in the socioeconomic hierarchy" (1978, 382), and specifically noted "the connection of college with entrance into high-status occupational careers" (298). They also found that social background diminishes in importance with age, accentuating the effect of education.

Featherman and Hauser acknowledged that some individuals deviate from the traditional sequence of earning a college degree when one is young before embarking on a career, but they were unable, with their data, to interpret the occupational effect this "variation" has on the individual (1978, 281).

Jencks and others sought to determine "the relationship between certain personal characteristics and economic success" (1979, 3). They sub-sampled eleven completed large-scale surveys of men aged 25-64 years old (including the two studies reviewed above) to examine such variables as family background, academic ability, personality traits, education, and race (3).

Jencks concluded that "the best readily observable predictor of . . . eventual status or earnings is the amount of schooling" (1979, 230). Specifically, education explains almost half the variance in occupational status
(230), a finding that is slightly higher than that found by Blau and Duncan (403) and Featherman and Hauser (262). Ultimately, all agree that higher education provides access to higher status and higher paying occupations.

Katz (1974) analyzed the relationship between education, age, and length of unemployment by studying census reports and Bureau of Labor statistics about men of various ages with a broad range of educational attainment who had been unemployed for a period in 1960. He concluded that "as the worker ages there is a loss of most of whatever effect schooling has in reducing unemployment" (604). This supports conclusions drawn by Blau and Duncan (1967) about the weakening effect of education with age.

The effect of age on new job opportunities was examined by Hutchens (1988). He studied the January 1983 Current Population Survey (95) in order to detect how newly hired old workers are distributed in the workforce compared to young workers. Based on finding inequality in the distribution, Hutchens concluded that job opportunities do decline with age.

Hutchens reports that employers' preference for hiring young workers often centers around the advantage of long-term relationships with workers. For one thing, this allows companies to recover their costs of job training and to base employee wages on long-term performance monitoring (1988, 90). Hutchens also notes that jobs
requiring physical stamina may qualify young workers over
old workers.

Bills (1988) studied the relationship between
educational credentials and hiring decisions to determine
the effects of job experience. He conducted case studies
of occupations within several businesses by interviewing
newly promoted persons and persons who make hiring
decisions. Bills determined that education frequently is
used as a screening device, but people who make hiring
decisions are primarily concerned with related work
experience. As Jencks observed, a chief advantage of
higher education is that it gets people in the door. Once
hired, however, job performance is more important for
promotion than educational credentials (1979, 55).

While researchers agree on the pronounced effect of
educational achievement on occupational status, much
disagreement remains about why education is so powerful,
particularly college education. Structural functionalists
argue that the manifest function of education is teaching
job-related skills. This is a popular belief that
rationalizes investing in higher education.

Many researchers, frequently conflict theorists,
propose alternative explanations of the power of
education. Berg argues that employers use education as a
"screening device" to narrow the pool of job applicants
(1971, 15). Moreover, he maintains that the real function
of college is not to train job skills but rather to provide credentials that communicate to employers a personal commitment to "'good middle-class values'" (78).

Collins expands this theme and, what is more, refers to credentials as "cultural currency" (1979, 62) that has the effect of "monopolizing" access to high status occupations to those who have the appropriate currency (178). The use of education as a tool in the competition over scarce resources is a major theme in Collins' work.

The conclusions drawn by the researchers whose work was reviewed here establish that there is a very strong relationship between educational achievement, occupational opportunities, and upward mobility. There are conflicting theoretical interpretations about the effect of the relationship. Nonetheless, the relationship has been found to exist, and it has a profound effect on individuals' lives.

**The Role of Higher Education in the Occurrence of Occupational Mobility**

**Enrollment Trends**

Stern and Chandler (1987) report that the number of people enrolled in American higher education increases each year. From 1947 to 1985, student enrollment grew from 2.3 million to 12.2 million. In one five-year period, between 1980 and 1985, enrollment increased ten percent (120).
Some of the increase is due to greater participation of students of traditional college age, that is, 18-24 years old. College enrollment for this group increased four percent between 1980 and 1985, even as the total number of young adults in the population decreased six percent during the same time period (Stern and Chandler 1987, 124).

An even larger gain in college enrollment rates is made by students 25 years of age and older. Enrollment of this group increased over 17% between 1980 and 1985, accounting for over 35% of the total college enrollment in 1985 (Stern and Chandler 1987, 124).

Reasons for Enrolling

The reasons given by college freshmen for deciding to go to college are consistent with human capital theory and social mobility theory. In a 1987 study by the American Council on Education, seventy-one percent of the students surveyed said that their reason for going to college is "to make more money" (7). "Get a better job" was the answer given by 82.6% "Learn more about things" was the reason given by 72.4% of all freshmen sampled (58). The top personal goal of 75.6% of college freshmen surveyed was "being very well off financially" (60).

Apparently these students believe that college education can be a vehicle to achieving employment and
income. It is commonly known that workers with college degrees generally have higher beginning salaries, lower unemployment rates, higher labor force participation, and higher lifetime earnings (Levitan 1981, 168). In fact, male college graduates earn 50 percent more over a lifetime than high school graduates (Linden 1986, 4). Additionally, the jobs they take, often in professional, technical, and managerial positions, generally have higher prestige than those taken by high school graduates (Ehrenhalt 1983, 29).

Today 21% of the 87 million households in America are headed by college graduates (Linden 1986, 4). Their income and prestige is observed and serves to encourage others to pursue their goals through higher education.

For some, the alternative to attending college is dismal. One private study by the Commission on Youth and America's Future entitled "The Forgotten Half: Pathways to Success for America's Youth and Young Families" reports that "young people who do not attend college have a high chance of facing unemployment or jobs with poverty-level income and little hope for advancement" ("Bleak outlook seen for youths without college").

Work and occupation are also strong incentives for nontraditional students to enroll in college. These students indicate that career development and career
transition are their major reasons for returning to school (Griff 1987, 469). Finnegan, Westefeld, and Elmore report rapid economic growth, depersonalization of work, extreme specialization, and increased work-related stress as reasons people give for changing occupations and enrolling in college (1981, 69).

Griff reports that Aslanian and Brickell found three basic reasons students give for returning or resuming their college education: (1) career changes or implementation, (2) transitions in their family lives, and (3) transitions in their leisure patterns (1987, 469).

Likewise, Bodensteiner found that reasons for attending college that are frequently given by University of Northern Iowa (UNI) nontraditional students include personal growth and development, career advancement, and career change (1989, 92).

In summary, college education is commonly perceived as the vehicle for relieving life conditions, increasing life chances, and positioning or re-positioning oneself in the labor market. People have faith in higher education, and the expected outcomes are very similar, regardless of students' age.

Assessing Outcomes

The attainment of expected outcomes of higher education has been analyzed by researchers who attempt to assess the overall returns of earning a college degree.
One such researcher is Richard Freeman. In 1976, Freeman studied job opportunities for college graduates. He found that a declining demand for college graduates (65) coupled with increased numbers of graduates reduced the economic return on individuals' investment in a college education (68-69). He referred to the 1970 recession when individuals' rate of return on college education declined from 12.5% in 1968 to 10% in 1973 (204).

On a smaller scale, many academic departments try to assess their own effectiveness in preparing students for the job market. A common method involves student outcome studies, a technique for determining the success of graduates in obtaining entry-level positions (Nall, Henry, and Meszaros 1979, 6).

Similarly, many college placement offices, such as the office at UNI, conduct annual surveys to learn about the occupational opportunities of their recent graduates. Likewise, national agencies such as the U. S. Department of Education annually survey thousands of graduates in order to determine, among other things, employment outcomes. Clearly a great deal of follow-up information is collected by numerous agencies.

The results of the various surveys are usually analyzed in standard ways. Outcomes of the college experience are typically reported according to students' major, sex, and race. But the outcomes are not also
reported according to students' age. Since over one-third of college enrollment consists of students of nontraditional age (Stern and Chandler 1987, 124), this is a significant omission.

At least one college placement director believes that there is a difference in occupational opportunities available to younger and older graduates. She notes that "older job seekers will inevitably encounter difficulties in the job search, since age discrimination is still with us" (Carr 1989, 39).

Age discrimination may be a serious barrier for nontraditional graduates who expect increased occupational opportunities from their college degree. The extent to which the recently acquired college degree can overcome age discrimination is unknown.

Summary

Researchers agree that occupation is the best indicator of socioeconomic success and that education is strongly correlated with occupational opportunities. Investigators such as Blau and Duncan (1967) and Featherman and Hauser (1978) provide empirical evidence for a relationship between higher education and occupational attainment. This may explain why college enrollment is growing, even though the proportion of people of traditional college age in the population is declining (Kaufman 1986, 1). The decline in the real
number of traditional college students is compensated for by greater participation of this age group and by increased enrollment of individuals beyond the traditional college age (5).

The three major types of studies reviewed here present evidence that age weakens the effects of educational attainment upon occupational opportunity. This suggests that a college degree earned mid-life may not compensate for the limited occupational opportunities individuals experience as they age. Additionally, at least one college placement director believes that nontraditional graduates confront age discrimination when they try to penetrate the job market.

In spite of this, reports of occupational outcomes of bachelor's degrees earned specifically by nontraditional graduates are not available. The following sections explain how this study attempts to provide such information.
CHAPTER 3
Design and Procedures

Design

This is a descriptive study which employs a cross-sectional time design in order to ascertain occupational outcomes of bachelor's degrees earned by nontraditional students.

The data were drawn from 1984-1988 graduates of the University of Northern Iowa (UNI) who were 25 years old or older at the time they graduated. Four hundred nontraditional graduates were randomly selected from a universe of 1091 using a sampling plan which stratified subjects by gender and year in which the degree was received. The research instrument was a mail questionnaire designed for this study by the researcher.

Procedures

The Questionnaire

The questionnaire has four main parts (see Appendix A). Part I elicits demographic information. Part II consists of a seven-item index developed by the researcher to identify what outcomes nontraditional students expect of their college degree. Part III consists of questions about pre-graduation and post-graduation occupations and salaries. Part IV is comprised of questions concerning
respondents' employment characteristics, that is: (1) labor force participation, (2) job fit, and (3) career potential. (A list of the specific questions used to elicit particular information appears in Appendix E.)

The questionnaire was reviewed by four individuals experienced in instrument design, survey research, social stratification, work and occupation research, and issues in higher education.

Subjects were each mailed a questionnaire, cover letter, and a pre-addressed, postage-paid envelope (see Appendices A and B). The questionnaire was anonymous in that survey participants were not asked to personally identify themselves. Four weeks after the first mailing, reminder postcards were sent to 270 non-respondents (see Appendix C). Three weeks after that a second copy of the questionnaire, a cover letter, and a pre-addressed, postage-paid envelope was mailed to the remaining 213 non-respondents (see Appendix D). The eventual number returned was 232. After respondents with master's degrees were eliminated, the sample size was reduced to 212, or fifty-three percent.

Analysis of Data

The parts of the questionnaire relate to the research hypotheses and correspond to the manner in which the data were analyzed and reported. Part I of the questionnaire is reported as "Part I: Demographics." Part II of the
questionnaire provides data for the study section called "Part II: Expectations and outcomes." Data from Part III of the questionnaire are reported as "Part III: Mobility," and relate to the first hypothesis. Questions from Part IV correspond to the study section entitled "Part IV: Employment characteristics." This section has three components: (1) Labor force participation relates to the second hypothesis, (2) Job fit concerns the third hypothesis, (3) Career potential relates to the fourth hypothesis.

**Part I: Demographics.** Questions about sex and race were asked because, like age, they are ascribed characteristics that affect opportunity and mobility (Blau and Duncan 1967; Featherman and Hauser 1978). They were analyzed to establish that the UNI sample was representative of nontraditional graduates in general. Geographic mobility is also a relevant factor for analysis since the ability to relocate may affect available occupational opportunities.

**Part II: Expectations and outcomes.** Subjects were presented with seven reasons people frequently give as important in their decision to earn a college degree (Bodensteiner 1989, 92). The reasons can be seen as expected outcomes students have of the college degree, such as an increase in salary or opportunities to meet new and interesting people. Respondents were asked to
indicate on a 7-point index the extent to which each reason influenced their decision to earn a college degree. A response of "0" indicated the reason was "not" a reason, while a response of "7" indicated it was a "very important" reason. The mean score of each indicated how important that given reason was in the respondents' decisions to earn college degrees.

The outcomes of each item were ascertained in two ways. The first way involved simple statistical tests. To determine whether those people who said salary increase was an important reason for earning a college degree actually did experience an increase in salary, a t-test of pre-graduation and post-graduation mean income was conducted.

The other way to determine outcomes involved analyzing respondents' answers to questions which asked them to compare their post-graduation job with their best pre-graduation job. For example, to learn if the expectation "meet new and interesting people" had been fulfilled, respondents were asked whether the people they have worked with since graduation are more interesting than those they worked with at their best previous job. (The categories "Strongly Agree" and "Agree" were collapsed to form one category, "Agree." Likewise, the combination of "Strongly Disagree" and "Disagree" became "Disagree.") The two responses were crosstabulated, a
method that often reduces the number of cases but does reveal outcomes.

In some cases, both methods were used. This part of the study was not the basis for hypothesis testing.

**Part III: Mobility.** The second part of the study is a retrospective time study intended to determine whether nontraditional graduates who held jobs before graduation have experienced upward occupational mobility since receiving their college degrees.

Two sets of questions, one about pre-graduation occupations, the other about post-graduation occupations, provided data for this aspect of the study. The questions were worded similarly to 1980 Census questionnaire items (U. S. Department of Commerce 1982, iv). A new variable, Socioeconomic Status (SES), was created by first converting the raw data to a Census Occupational Code as outlined by the Bureau of the Census (U. S. Department of Commerce 1982, iv-vi). Then this code was matched to its corresponding socioeconomic score on an index\(^1\) that reflects the socioeconomic status of occupations (Stevens and Cho 1985, 153-167).

\(^1\)The Socioeconomic Index (SEI), first developed by Duncan (Reiss 1961), was chosen because it is one of the most widely used instruments for evaluating the social and economic rank of occupations. Researchers choose the SEI because it incorporates subjective scores of occupational prestige and objective data on education and income. Moreover, Stevens and Cho's updated version of Duncan's index identifies a wide range of occupations.
Socioeconomic scores of pre-graduation occupations were compared to the socioeconomic scores of post-graduation occupations. A significant difference in scores was taken to indicate occupational mobility. Differences were detected by t-tests.

It was hypothesized that there would be no significant difference between pre- and post-graduation socioeconomic scores.

**Part IV: Employment characteristics.** The third aspect of the study is a cross-sectional comparison of three employment characteristics of UNI nontraditional graduates and graduates of all ages in a national survey. UNI nontraditional graduates' responses to questions about labor force participation, job fit, and career potential were compared to responses to similar questions posed in the 1985 Recent College Graduates (RCG) survey (Greene 1988). The RCG is a national survey conducted by the U. S. Department of Education (1987) of approximately 16,000 1983-84 bachelor's degree recipients representing the overall graduate population.

A significant difference in responses to the questions about these three employment characteristics indicated that the groups did not have equal occupational opportunities. Differences were detected by examining frequencies of responses and constructing confidence intervals.
It was hypothesized that the frequency that UNI nontraditional graduates would report experiencing labor force participation would be lower than the graduates of all ages in the national survey. It was also hypothesized that UNI graduates would report job fit at a lower frequency than the overall graduate population. It was further hypothesized that UNI nontraditional graduates would report experiencing career potential at a lower frequency than graduates of all ages in the national survey.

Establishing Representativeness

Data from the national sample specifically about nontraditional graduates allowed additional comparisons to be made between UNI nontraditional graduates and nontraditional graduates across the nation. These data were provided by Bernie Greene, statistician with the U. S. Department of Education and the author of the national report which this study used as its main source of comparison (1990). While these comparisons were not the basis of hypothesis testing, they demonstrate that the UNI sample may be representative of nontraditional graduates overall.

In addition, limited data drawn from UNI graduates of all ages were available on one variable, job fit. The information came from the Department of Placement and Career Services on the UNI campus (University of Northern
Iowa 1984, 1985). Each year the department initiates one survey of all students who graduate in December, May, and July. This information was also not used for hypothesis testing, but it showed that on at least one variable UNI graduates of all ages are representative of college graduates across the nation.

One condition must be acknowledged when comparing data from the national survey to that from the UNI nontraditional graduates survey, and that is the matter of sampling. The national survey apparently was first stratified on the basis of degree earned (bachelor's or master's) and then random sampling was conducted. The UNI data base was sorted after the questionnaires were received, thus the stratification took place at a different stage. The effect appears to be the same; this researcher considers the two samples comparable.
CHAPTER 4
Data Analysis and Findings

The results of this study are based on responses from 212 UNI nontraditional graduates who earned bachelor's degrees between 1984 and 1988. All statistical computations were performed by the SPSS$^\text{x}$ program.

Part I: Demographics

Table 1 displays the distribution of respondents' sex and age. They were almost evenly divided according to sex. Their ages ranged from 26-63 years old. The group most strongly represented was 25-34 year old males. The size of this group was more than double that of any other age group of either sex. Women aged 25-34 and 35-44 made up the next two largest categories.

The respondents included one American Indian, one Asian or Pacific Islander, four black and 206 white persons. White respondents constituted 97.2% of the sample.

Seventy percent of the respondents reported that they were employed either full-time or part-time prior to enrolling at UNI. Eleven percent were unemployed and searching for work. Eight percent were not employed but were not looking for work; five percent had never been employed. The remaining five percent had been members of the armed forces.
Almost 22% of the respondents majored in teaching, the most common major field of study. Approximately twelve percent majored in industry. Management and accounting each had almost nine percent, and social work accounted for about six percent.

Almost 64% of the respondents said they were willing and able to relocate for employment purposes.

**Part II: Expectations and Outcomes**

Table 2 summarizes the findings of this part of the study. A discussion of each finding follows Table 2.

Column 1 in the table refers to seven reasons people frequently give for earning a college degree (see the note appearing at the end of the table). These reasons represent expected outcomes, and they appear in order of
Table 2
Expectations and Outcomes of Nontraditional Students Earning a College Degree

<table>
<thead>
<tr>
<th>Reason</th>
<th>Total N (2)</th>
<th>Mean (3)</th>
<th>% of N Attained (4)</th>
<th>&quot;Important&quot; n (5)</th>
<th>% of N Attained (6)</th>
<th>% of n Attained (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>209</td>
<td>5.90</td>
<td>78.2</td>
<td>165</td>
<td>92.8</td>
<td>76.9</td>
</tr>
<tr>
<td>2</td>
<td>210</td>
<td>4.99</td>
<td>53.4</td>
<td>169</td>
<td>80.5</td>
<td>40.8</td>
</tr>
<tr>
<td>3</td>
<td>209</td>
<td>4.89</td>
<td>67.5</td>
<td>157</td>
<td>75.1</td>
<td>71.3</td>
</tr>
<tr>
<td>4</td>
<td>211</td>
<td>3.67</td>
<td>49.0</td>
<td>123</td>
<td>58.3</td>
<td>52.4</td>
</tr>
<tr>
<td>5</td>
<td>208</td>
<td>3.18</td>
<td>60.4</td>
<td>96</td>
<td>46.2</td>
<td>59.4</td>
</tr>
<tr>
<td>6</td>
<td>211</td>
<td>3.11</td>
<td>68.9</td>
<td>99</td>
<td>46.7</td>
<td>70.4</td>
</tr>
<tr>
<td>7</td>
<td>208</td>
<td>1.08</td>
<td>2.8</td>
<td>30</td>
<td>14.4</td>
<td>13.3</td>
</tr>
</tbody>
</table>

Note:

Column 1: Reasons given by nontraditional students for earning a college degree:
1 = Personal growth and development
2 = Increase salary
3 = Enter a new occupation
4 = Meet new and interesting people
5 = Advance in occupational position
6 = Improve status or prestige
7 = Maintain occupational position

their mean score, which indicates, on a scale of 0 to 7, the extent each was a reason (see Column 3). Column 4 displays the proportion of respondents in the entire UNI sample who attained the particular expectation. The table reports in Column 5 the number of respondents who scored
the item "4," "5," "6," or "7." These scores were interpreted as indicating that the reason or expectation was an "important" one. The percentage of respondents who indicated the particular reason was an "important" one appears in Column 6. The percent of those respondents who ranked the expectation "important" is indicated in Column 7.

**Personal Growth and Development**

As Table 2 displays, "personal growth and development" was rated highly, indicating it is an important expectation nontraditional graduates have of earning a college degree. Ninety-three percent of the respondents scored this item "4" or above.

Personal growth and development is a difficult concept to operationalize; to measure the fulfillment of this expectation or hope is equally difficult. In this study, if the respondent said that his or her current job is more challenging than the best previous job, the expectation "personal growth and development" was taken as being fulfilled or attained.

The goal has been attained by most people who sought it. This outcome was calculated by crosstabulating the reason with responses that compared the level of challenge at respondents' present job with that at their best previous job (see Table 3). (This reduced n to 174.) Almost seventy-seven percent of those who said this goal
was an important reason reported that their work since graduation is more challenging than their work before. Seventy-eight percent of the entire UNI sample attained this goal.

Table 3
Crosstabulation of Expectation and Outcome:
Personal Growth and Development by Current Job Perceived More Challenging

<table>
<thead>
<tr>
<th></th>
<th>Challenging Work</th>
<th></th>
<th></th>
<th></th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>Undecided</td>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>127</td>
<td>8</td>
<td>30</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td></td>
<td>76.9</td>
<td>4.8</td>
<td>18.2</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Not Important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td></td>
<td></td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Increase Salary

Eighty percent of the respondents said that an increase in salary was an important reason for them to earn a college degree. Overall, this was the second most important expected outcome.

The outcome of this expectation was calculated by comparing respondents' annual incomes for pre-graduation and post-graduation jobs. In a number of cases there had
been no pre-graduation income for several years, so this amount was adjusted for inflation to the 1988 level using the Consumer Price Index.

A t-test compared the adjusted pre-graduation income with the post-graduation income. Data matched on 126 cases reflect a mean pre-graduation income of $19,305 in 1988 dollars (SD = 10,397) and a mean post-graduation income of $22,460 (SD = 9,476). This difference of $3,155 (SD = 10,950) is significant at the .05 significance level (t = 3.23, p < .002). Forty-one percent of the respondents who said this was an important reason for earning a college degree actually experienced an increase in salary.

There were 149 cases in the entire UNI sample with both pre- and post-graduation salary information. Of those 149 cases, fifty-three percent experienced post-graduation salary increase.

Enter a New Occupation

Seventy-five percent of the respondents said that having a different occupation was an important expectation of earning a college degree. The outcome of this expectation was found by constructing a new variable reflecting changed occupations and calculating a frequency distribution of those who said this was an important expectation (see Table 4). Of those who said this was important, seventy-one percent reported having occupations
since their graduation that are different from those they held before graduation. Sixty-seven percent of the entire sample reported having different post-graduation occupations.

Table 4

Frequency Distribution of Expectation and Outcome: Different Occupation Controlling for Enter a New Occupation

<table>
<thead>
<tr>
<th>&quot;Important&quot; Outcome</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Occupation</td>
<td>112</td>
<td>71.3</td>
</tr>
<tr>
<td>No New Occupation</td>
<td>45</td>
<td>28.7</td>
</tr>
<tr>
<td>Total</td>
<td>157</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall UNI Outcome</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Occupation</td>
<td>143</td>
<td>67.5</td>
</tr>
<tr>
<td>No New Occupation</td>
<td>69</td>
<td>32.5</td>
</tr>
<tr>
<td>Total</td>
<td>212</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Meet New and Interesting People

Fifty-eight percent of the UNI sample said an important goal of college was to meet new and interesting people. Table 5 displays the crosstabulation of this expectation by the response to a question about whether co-workers at their current job are more interesting than
those at their best previous job. (This reduced n to 151). Approximately 52% of those who rated this item as important said that they felt the people at their post-graduation job were more interesting than those they worked with before graduation. The rate was 49% for the entire UNI sample.

Table 5

Crosstabulation of Expectation and Outcome: Meet New and Interesting People by Current Co-workers Perceived More Interesting

<table>
<thead>
<tr>
<th>Meet new People</th>
<th>More Interesting Co-workers</th>
<th>Column Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>Undecided</td>
<td>Disagree</td>
</tr>
<tr>
<td>Important</td>
<td>55</td>
<td>27</td>
</tr>
<tr>
<td>Important</td>
<td>52.4</td>
<td>25.7</td>
</tr>
<tr>
<td>Not Important</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Important</td>
<td>41.3</td>
<td>32.6</td>
</tr>
</tbody>
</table>

Advance in Occupational Position

Forty-six percent of the UNI respondents said that an advance in position was important in their decision to
earn a college degree. In Table 6, a comparison of pre-graduation socioeconomic scores with post-graduation socioeconomic scores shows that 59.4% of those who said this was an important goal did advance in occupational position. Sixty percent of the entire UNI sample advanced in occupational position.

Table 6

Frequency Distribution of Expectation and Outcome:
Increased Post-graduation SES Controlling for Occupational Advance

<table>
<thead>
<tr>
<th>&quot;Important&quot; Outcome</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased SES</td>
<td>57</td>
<td>59.4</td>
</tr>
<tr>
<td>No Increased SES</td>
<td>39</td>
<td>40.6</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Overall UNI Outcome

<table>
<thead>
<tr>
<th>&quot;Important&quot; Outcome</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased SES</td>
<td>128</td>
<td>60.4</td>
</tr>
<tr>
<td>No Increased SES</td>
<td>84</td>
<td>39.6</td>
</tr>
<tr>
<td>Total</td>
<td>212</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Improve Status or Prestige

Almost forty-seven percent of the respondents said improved status or prestige was an important reason for
their earning a college degree. As Table 7 indicates, crosstabulating this expectation with answers to statements about the perceived prestige of the current job revealed that approximately 70% of those who said this was important have the perception that their post-graduation job is more prestigious than their best pre-graduation job. About 69% of the entire sample reported that they felt their job after graduation had more prestige than the job they held before. (This test reduced n to 135.)

Table 7

Crosstabulation of Expectation and Outcome:
Improve Prestige and Status by Perception that Current Job has Higher Prestige

| Count | Perceived Higher Prestige | | | | \hline | | Status and Prestige Important | Agree | Undecided | Disagree | Row Total | \hline | | | 62 | 14 | 12 | 88 | 100.0 | \hline | | Status and Prestige Important | 70.4 | 16.0 | 13.6 | | | \hline | | Not Important | 31 | 6 | 10 | 47 | 100.0 | \hline | | Not Important | 66.0 | 12.8 | 21.2 | | | \hline | | Column Total | 93 | 20 | 22 | 135 | 100.0 | \hline

Empirical support of this perception is revealed in Table 8, a distribution of the number and percentage of
respondents rating this item as important and reporting that they think that their current job has higher prestige whose socioeconomic scores (SES) actually did increase. (Socioeconomic scores were assigned to occupations using Stevens and Cho's (1985) Socioeconomic Index.) Seventy-two percent of those who perceived having more prestigious jobs after graduation actually did have jobs with a higher SES. (This test reduced \( n \) to 62.)

<table>
<thead>
<tr>
<th>Increased SES</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>72.6</td>
<td></td>
</tr>
<tr>
<td>No Increased SES</td>
<td>17</td>
<td>27.4</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Maintain Occupational Position

This was not an important goal of the majority of respondents. As Table 9 on the next page indicates, only fourteen percent noted it was important; thirteen percent of those respondents stayed in the same occupation. In
the entire UNI sample, only 2.8% of the respondents remained in the same occupation.

Table 9

Frequency Distribution of Expectation and Outcome:
Maintain Occupation Controlling for Changed SES

<table>
<thead>
<tr>
<th>Overall UNI Sample</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different Occupation</td>
<td>206</td>
<td>97.2</td>
</tr>
<tr>
<td>Same Occupation</td>
<td>6</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>212</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Important</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different Occupation</td>
<td>26</td>
<td>86.7</td>
</tr>
<tr>
<td>Same Occupation</td>
<td>4</td>
<td>13.3</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Summary

Between one-half and three-fourths of the UNI nontraditional respondents attained the expectations they rated as important. Overall, more than one-half of the entire UNI sample attained most of the seven reasons commonly given for earning a college degree. The most popular reason noted was personal growth and development. Most people attained this expectation, whether or not they
rated it as an important goal. The least popular reason was maintain occupational position. Ninety-seven percent of the entire population changed occupational position. Most of those who said this was an important goal did not maintain their occupational position.

Part III: Mobility

This part of the study ascertained the occurrence of occupational mobility experienced by UNI nontraditional graduates. Upward mobility was said to have occurred when the post-graduation occupation had a higher socioeconomic score (SES) than the pre-graduation occupation's SES. The analysis includes only those respondents who reported having both a pre-graduation and a post-graduation occupation. A version of Duncan's Socioeconomic Index updated by Stevens and Cho (1985) was used to assign scores to occupations.

Upward mobility was calculated by creating new variables, higher post-graduation SES and not-higher post-graduation SES. In order to determine the effect of age on the occurrence of upward mobility, the new variables were crosstabulated by age category (see Table 10). (This reduced \( n \) to 147.)

Eighty-six percent of all respondents who reported having occupational experience both before and after graduation experienced significant upward occupational mobility. For this population, the average pre-graduation
SES was 31.95 (SD = 12.683); the mean post-graduation socioeconomic score was 53.61 (SD = 15.172), a statistically significant increase of more than one standard deviation ($t = 15.25, p < .001$).

Table 10
Crosstabulation of Post-Graduation SES by Age Category

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Higher SES</th>
<th>Not Higher SES</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher SES</td>
<td>Not Higher SES</td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>22</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>91.7</td>
<td>8.3</td>
<td>100.0</td>
</tr>
<tr>
<td>30-34</td>
<td>54</td>
<td>8</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>87.1</td>
<td>12.9</td>
<td>100.0</td>
</tr>
<tr>
<td>35-39</td>
<td>26</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>86.7</td>
<td>13.3</td>
<td>100.0</td>
</tr>
<tr>
<td>40-44</td>
<td>12</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>80.0</td>
<td>20.0</td>
<td>100.0</td>
</tr>
<tr>
<td>45-49</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>80.0</td>
<td>20.0</td>
<td>100.0</td>
</tr>
<tr>
<td>50-54</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>66.7</td>
<td>33.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
<td>21</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>85.7</td>
<td>14.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>
According to Stevens and Cho, the mean SES for the 1980 national labor force was 34.48 (1985, 152). Pre-graduation socioeconomic scores for all UNI nontraditional graduates who were sampled had a mean of 33.39. Post-graduation scores for UNI nontraditional graduates were significantly higher; the mean socioeconomic score was 53.75. Table 11 shows the most common pre- and post-graduation occupations.

Table 11
Five Most Common Pre-Graduation and Post-Graduation Occupations of UNI Nontraditional Graduates

<table>
<thead>
<tr>
<th>Pre-graduation Occupations</th>
<th>SES</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers and Administrators</td>
<td>47.26</td>
<td>12</td>
</tr>
<tr>
<td>Secretaries</td>
<td>34.73</td>
<td>12</td>
</tr>
<tr>
<td>Supervisors and Proprietors in Sales</td>
<td>48.10</td>
<td>8</td>
</tr>
<tr>
<td>Laborers</td>
<td>18.81</td>
<td>7</td>
</tr>
<tr>
<td>Machinists</td>
<td>24.44</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-graduation Occupations</th>
<th>SES</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers and Administrators</td>
<td>47.26</td>
<td>19</td>
</tr>
<tr>
<td>Accountants and Auditors</td>
<td>64.76</td>
<td>16</td>
</tr>
<tr>
<td>Teachers</td>
<td>52.99</td>
<td>16</td>
</tr>
<tr>
<td>Social Workers</td>
<td>65.71</td>
<td>14</td>
</tr>
<tr>
<td>Industrial Engineers</td>
<td>70.64</td>
<td>7</td>
</tr>
</tbody>
</table>
Mobility by Age

When the occurrence of upward occupational mobility was examined for the effects of age, it appeared that as age of UNI nontraditional graduates increased, the frequency of upward movement decreased. There was a steady decline in the proportion of individuals within each category who experienced upward occupational mobility as the age increases (see Figure 1). Conclusions about this occurrence must be drawn cautiously, however, because of the small number of cases in some age groups.

![Figure 1]

Upward Mobility Experienced by UNI Nontraditional Graduates According to Age

Summary

It was hypothesized that UNI nontraditional graduates with work experience would not find jobs of higher status
than the jobs they held before earning their college degree. However, most respondents did obtain jobs with significantly higher socioeconomic status than the jobs they held before; approximately 86% experienced upward occupational mobility. These findings do not support the research hypothesis.

**Part IV: Employment Characteristics**

Employment characteristics refer to three aspects of work with which nontraditional graduates were compared to all college graduates in the national sample. Figure 2

![Bar chart showing employment characteristics](image)

**Figure 2**

Employment Characteristics of the Graduates in the National Survey and UNI Nontraditional Graduates
summarizes comparisons of labor force participation, job fit, and career potential.

**Labor Force Participation**

Labor force participation refers to the proportion of graduates who were working full-time one year after college graduation. The proportion of graduates in the overall population who reported working full-time one year after graduation was 72.8. Using a standard error of .5 (Greene, 1989), a 95% confidence interval of 71.82-73.78 was constructed.

The proportion of UNI nontraditional graduates who reported working full-time one year after graduation was 74.4%. Using a standard error of .045, a 95% percent confidence interval of 74.31-74.49 was constructed (Figure 2 on page 50). Since the two do not overlap, it can be said that the proportion of UNI nontraditional graduates reporting full-time employment one year after college graduation (74.4%) was higher than that reported for all college graduates in the national sample (72.8).

According to the national survey results, 75.6% of nontraditional graduates reported working full-time one year after graduation. The confidence interval at the 95% confidence level is 74.33-76.87 (standard error .65) (Greene, 1990). This suggests that the full-time employment payoff was also somewhat greater for
nontraditional graduates in the national sample than for UNI nontraditional graduates.

Labor force participation by age and sex. Table 12 displays the distribution of labor force participation according to age for both the UNI and national samples. Age groups are shown on the first three lines, and the overall rate of labor force participation follows. While the UNI nontraditional graduates in the 25-34 age category participated in the labor force at a higher rate than those in the national sample, the participation of the national sample was higher in the last two age groups. (Because there were so few respondents aged 55 and over, that category is not analyzed.)

<table>
<thead>
<tr>
<th>Age</th>
<th>UNI</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>83.2</td>
<td>76.9</td>
</tr>
<tr>
<td>35-44</td>
<td>68.8</td>
<td>73.2</td>
</tr>
<tr>
<td>45-54</td>
<td>56.5</td>
<td>67.0</td>
</tr>
<tr>
<td>Overall</td>
<td>74.4</td>
<td>72.8</td>
</tr>
</tbody>
</table>
When full-time employment one year after college graduation was examined by age and sex, a fuller picture emerged. Of 101 males who responded to this item, 96% reported wanting full-time work. Fully 89.7% of these were working full-time. Of 109 females who responded to this item, 85% wanted full-time employment. Of those, 75.3% were actually working full-time.

As can be seen in Table 13, of all those who reported that, upon graduation, they wanted full-time work, men

<table>
<thead>
<tr>
<th>Age and Sex</th>
<th>Working Full-Time</th>
<th>%</th>
<th>Couldn't find Full-Time Work</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>64</td>
<td>90.1</td>
<td>7</td>
<td>9.9</td>
</tr>
<tr>
<td>females</td>
<td>35</td>
<td>83.3</td>
<td>7</td>
<td>16.6</td>
</tr>
<tr>
<td>35-44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>17</td>
<td>85.0</td>
<td>3</td>
<td>15.0</td>
</tr>
<tr>
<td>females</td>
<td>27</td>
<td>73.0</td>
<td>10</td>
<td>27.0</td>
</tr>
<tr>
<td>45-54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>6</td>
<td>100.0</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>females</td>
<td>7</td>
<td>58.3</td>
<td>5</td>
<td>41.7</td>
</tr>
</tbody>
</table>
were more likely to obtain it than females in the same age category. The percentages having full-time work were seven percent higher for men than women in the 25-34 year age category. In the 35-44 age category, the difference was 12%, and in the 45-54 age group, it was nearly 42%.

The association between labor force participation, as it was measured here, and age and sex was a statistically significant one, as indicated by chi square tests at the .05 significance level.

Job Fit

Job fit refers to how related the job was to the graduate's major area of study in college. Respondents to the national survey and the UNI questionnaire were asked if their current job is "directly related," "somewhat related," or "not related." Responses of directly and somewhat related were collapsed to form one category. The proportions of graduates from each sample responding that their jobs are related to their major were compared.

The proportion of those from the national sample who reported that their current job is related to their major field of college study was 78.4 (see Figure 2 on page 50). Using a standard error of .7 (Greene, 1989), a 95% confidence interval of 77.03-79.77 was constructed. The confidence interval for UNI nontraditional graduates reporting the same was 80.64-80.76, based on 80.7%
(standard error .029) reporting their current jobs are related to their college major. The two intervals do not overlap, so it was concluded that the differences between the two populations are statistically significant, and that UNI nontraditional graduates were more likely than the graduates in the national sample to experience job fit.

As a group, UNI nontraditional graduates experienced job fit with greater frequency than the nontraditional graduates responding to the national survey; overall, 77.3% of nontraditional graduates in the national sample reported their job is related to their college major (Greene, 1990).

In annual surveys conducted by the UNI Placement Bureau of all students who graduate from UNI, similar questions about job fit are asked. Approximately 58.9% of the 1983-84 graduates reported that their job was related to their college major; graduates of the 1984-85 survey reported at a rate of about 43.3% (University of Northern Iowa, 1984, 1985). This is considerably lower than the percentages for the nontraditional populations.

Job fit by age and sex. Compared to graduates in the national survey, job fit was experienced more by UNI nontraditional graduates overall and in every age category except 45-54 years (see Table 14 on the following page).
The analysis for job fit according to sex and age is summarized in Table 15. Overall, women reported job fit
at a frequency rate of 82.3; males reported at 79.2. Almost ten percent more females aged 25-34 reported job fit than males in the same age category. However, approximately five percent more men aged 35-44 reported job fit than their female cohorts. In the 45-54 age category, 13% more females than males reported job fit. (Analyses of the oldest age group was not done due to the limited number of cases.)

Career Potential

Respondents of all ages to the national survey and UNI nontraditional graduates were asked to select the statement which best described their job. Responses of "a job with possible career potential" and "a job with definite career potential" were among the possible responses used. The proportion of graduates from each sample responding that their jobs had career potential were compared.

In the national sample, 66.9% of all graduates reported that their job has career potential (see Figure 2 on page 51). Using a standard error of .5 (Greene, 1989), a 95% confidence interval of 65.92-67.88 was constructed. The proportion of UNI nontraditional graduates reporting career potential was 77.3. Accordingly, a 95% confidence interval of 77.24-77.36 was constructed (standard error .032). The intervals do not overlap since the UNI
nontraditional graduates' responses were significantly higher (see Figure 2 on page 51).

**Career potential by age and sex.** As with job fit, UNI nontraditional graduates, compared to graduates of all ages in the national survey (Greene, 1990) did better in every category except the 45-54 year old, and there the rates were very close (see Table 16). (Due to the limited number of cases in the 55 years and over age group, data were not analyzed.)

<table>
<thead>
<tr>
<th>Age</th>
<th>UNI</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>78.4</td>
<td>69.5</td>
</tr>
<tr>
<td>35-44</td>
<td>75.5</td>
<td>71.4</td>
</tr>
<tr>
<td>45-54</td>
<td>75.0</td>
<td>76.1</td>
</tr>
<tr>
<td>Overall</td>
<td>77.3</td>
<td>66.9</td>
</tr>
</tbody>
</table>

UNI males and females reported the same rates of career potential; 77.1% males and 77.6% females reported that their job has career potential. Career potential examined according to sex and age category is summarized in Table 17 on the following page.
Table 17

Career Potential: Distribution by Sex and Age of UNI Nontraditional Graduates

<table>
<thead>
<tr>
<th>Age and Sex</th>
<th>Career Potential</th>
<th>%</th>
<th>No Career Potential</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>48</td>
<td>76.2</td>
<td>15</td>
<td>23.8</td>
</tr>
<tr>
<td>females</td>
<td>28</td>
<td>82.4</td>
<td>6</td>
<td>17.6</td>
</tr>
<tr>
<td>35-44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>12</td>
<td>80.0</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>females</td>
<td>28</td>
<td>73.7</td>
<td>10</td>
<td>26.3</td>
</tr>
<tr>
<td>45-54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>4</td>
<td>80.0</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>females</td>
<td>8</td>
<td>72.7</td>
<td>3</td>
<td>27.3</td>
</tr>
</tbody>
</table>

Summary

In this part of the study, UNI nontraditional graduates were compared to graduates of all ages in the national study. It was hypothesized that the UNI sample would have lower rates of labor force participation, job fit, and career potential than the national sample. However, a higher proportion of UNI nontraditional graduates obtained jobs within a year of graduation, found jobs related to their major, and worked in jobs with career potential than the graduates of all ages in the national study.
CHAPTER 5
Summary and Discussion

This research began with the view that bachelor's degrees earned by nontraditional graduates do not pay off in terms of occupational outcomes. However, results suggest that most UNI nontraditional graduates did have increased occupational opportunities after earning their college degrees. These results are based on comparisons of: (1) expected outcomes with actual outcomes, (2) pre-graduation jobs with post-graduation jobs, and (3) employment characteristics of graduates in the UNI sample with those of students in a national sample.

Summary

The study found that most UNI respondents decided to earn a college degree for reasons primarily related to occupation and income. These reasons are similar to those given by younger students. Between one-half and three-fourths of the UNI nontraditional graduates reported that they had attained the outcomes they expected to attain after earning a college degree.

Second, most of the UNI respondents with job experience were able to obtain jobs with significantly higher status than those they had held before earning a college degree. About eighty-six percent of this group of
respondents reported experiencing significant upward occupational mobility. This finding does not support the first research hypothesis.

Further, more UNI respondents than respondents to the national survey reported having obtained a job within one year of college graduation. Thus, the second research hypothesis, which stated the opposite, is not supported by the data.

Finally, according to their reports, more UNI graduates' jobs were related to their major fields of study and had career potential than jobs obtained by graduates of all ages, as reported in the national survey. Thus, neither the third nor the fourth research hypotheses are supported by the data.

Discussion

Although the results of this study do not support the hypotheses, they are generally consistent with the insights of the classical theorists and the findings of the social mobility researchers that were cited in this study.

That most respondents invested the large amounts of time and money involved in earning a college degree primarily for occupational reasons demonstrates the major role that work and occupation play for Americans. Such a strong emphasis may reflect the work ethic that Weber
describes in which people attach almost spiritual meaning to the value of work and individual success.

The study's results support Marx's insights on the exploitative nature of capitalism. Marx argues that capitalism depends on worker objectification and the sale of labor power which are used as tools in the competition for power, prestige, and wealth. Results demonstrate workers' recognition and acceptance of the competitive labor "market" where individuals "sell" themselves.

Data indicating that most people earn a college degree primarily for occupational reasons also support human capital theory. This theory, closely aligned with Marx's analysis, is that workers commodify themselves through self-investment in order to improve the saleability of their labor.

The Blau and Duncan and Featherman and Hauser assertion that education is strongly correlated with occupational opportunities is evidenced in this study by the increased occupational opportunities most UNI graduates experienced after receiving their college degree. Most respondents enjoyed major upward occupational mobility after graduating. However, because this study did not include a control group of similar individuals who did not earn a college degree, it is difficult to determine how much of the UNI respondents' success can be attributed to their education.
The research findings do not support this researcher's interpretation of Blau and Duncan's statement that age has a weakening effect on the relationship between education and occupational achievement. The study relied heavily on the researchers' interpretation that college degrees earned by individuals who are 25 years old or more do not compensate for the effect of age in reducing job opportunities. Clearly the results here do not support that interpretation. Likewise, there is no support for the four research hypotheses which were derived from that interpretation.

It is more likely that Blau and Duncan's statement referred to the increasing gap between college graduation and particular occupational events, not age itself. This research does not explore that interpretation.

Hutchens's discovery (1988) of declining job opportunities for old workers receives some support from this study. This may seem surprising in light of the overall research results. However, the overall positive results of this study are for the group as a whole. For the overall group, the investment in college appears to have paid off, at least in terms of occupation. In fact, the payoff appears to be less for older respondents than for younger ones. This is especially true in labor force participation, where there was a difference of 27
percentage points between UNI's youngest (aged 25-34) and oldest (aged 45-54) respondents (see Table 12 on page 53).

Furthermore, at least on this variable, the respondents' sex also appeared to affect occupational outcomes. The decrease in the rate of participation with age was far more dramatic for women than for men. Not only is the overall rate of participation in every age category lower for women than for men, in every age category the distance between men and women increases substantially until finally, in the third category, men who want to work are almost twice as likely to be participating in the labor force than women who want to work (see Table 13 on page 54).

This difference between men and women does not appear when examining the other employment variables. Apparently once the UNI women were able to obtain work, they were as likely as men to experience job fit and career potential.

As far as earning more money, some observers might point out that economically the UNI nontraditional graduates may not be better off than they were before they earned the degree. Although an increase of salary was an important expectation of eighty percent of the respondents (see Table 2 on page 37), 59.2 of those who indicated an increase in salary was important had not attained it at the time of the study.
In addition to lower than expected current and future earnings, many respondents experienced a loss of potential past earnings. It must be recalled that about 70 percent of all the respondents worked either full-time or part-time prior to enrolling at UNI, and another 11 percent were searching for work. In most cases, if the respondents had not been attending college, they probably would have been in the labor force earning about $19,000 annually (the mean pre-graduation salary). However, their opportunity to continue earning this amount was sacrificed when they quit their jobs or gave up their working time in order to earn a college degree. These "opportunity costs," plus tuition costs exceeding $1200 annually, must be weighed when ascertaining the economic effect of earning a college degree.

Some observers might further qualify the apparent success of the UNI nontraditional graduates, at least when they are compared to college graduates of all ages in the national survey, by attributing it the past work experience that eighty-nine percent of UNI nontraditional graduates had. Such logic would be consistent with Blau and Duncan's observation (1967) that the influence of training and experience increases with age as the effect of education declines.

However, as was reported in an earlier section, Bills (1988) found that employers are primarily concerned with
related work experience. In fact, though, an analysis of respondents' pre- and post-graduation jobs according to the Census Bureau's thirteen Major Occupational Groups makes it evident that most respondents did not remain within the same major occupational grouping (see Appendix F). This suggests that experience in particular kinds of employment cannot explain the occupational success of UNI nontraditional graduates.

This researcher acknowledges that some people pursue a college degree for other than economic reasons. The research instrument used in this study did not provide adequate opportunities for respondents to express such reasons, aside from "personal growth and development" and "meet new and interesting people." Even striving for personal growth and hoping to meet interesting people are not necessarily non-occupational goals, although they might be, and having these goals does not mean that people who desire these outcomes of their college education are not also interesting in improving their occupational position.

In spite of these many considerations, the overall results of this study suggest that most UNI nontraditional graduates attained most of the occupational outcomes they expected. They significantly increased their socioeconomic status, and they had higher rates of labor
force participation, job fit, and career potential than graduates of all ages in the national study.

This researcher's conclusion that most UNI graduates experienced occupational "success" after their graduation is also based on the respondents' own perceptions of their current job situation. Eighty-two percent of the respondents said they were "satisfied" with their current job, and seventy-seven percent reported that their current job is an improvement over their previous jobs.

**Limitations**

A major limitation of this study was the lack of a control group. As was stated earlier, a control group might have shown how much occupational mobility occurred for workers without a college education. A comparison of the two groups would render more valid results.

A more definitive study could have been done if UNI respondents were only compared to 18-24 year old students rather than to both younger and older students.

Another limitation of this study was the limited number of respondents over the age of 55. Analysis of employment characteristics by age was not conducted for these respondents because of that.

Comparisons on additional variables might have further clarified the effect of age in this study. For example, questions eliciting respondents' perceptions of the effect of their previous work experience on
post-graduation job opportunities would help "tease out" the seemingly tangled relationship between age, education, and work experience.

Finally, the study could have incorporated qualitative methods for part one of the study, expectations and outcomes. Interviews using open-ended questions would have given the respondents opportunities to provide the researcher with a list of their expectations, rather than the other way around. Respondents might have expressed the meaning of their expectations and what they thought would constitute fulfillment. Qualitative methods are superior for learning and understanding respondents' expectations and their perceptions of outcomes.

Implications for Further Study

These shortcomings present researchers with numerous opportunities for additional study of the outcomes of college degrees earned by nontraditional graduates. One opportunity is to repeat this study but correct the limitations discussed earlier. To summarize, the researcher should increase the sample size or stratify by age as well as by graduation year, add a control group, compare to graduates 18-24 years old rather than graduates of all ages, and add qualitative methods in the first part of the study.
Additional research is necessary to clarify the effects of the gap between college graduation and particular occupational events versus the effects of age. A replication of Blau and Duncan's 1967 study using nontraditional graduates might accomplish this. Such research might include examining the intergenerational effect of a college degree earned mid-life.

A study of the effect of earning a college degree as a nontraditional student on peer and family interrelationships would further inform us of outcomes that may be different for older students than for those of traditional age. Researchers might explore how the college experience changes an older individual in ways not related to occupation and how these changes alter the way older students deal with significant others. Are there impacts on marital status and satisfaction? Are the quality of the changes different for males than for females? Does the size of community one lives in and the cultural expectations of that community make a difference?

Research of each of these topics would fill a gap that currently exists in the literature about nontraditional students.

Conclusion

The present study helps clarify the meaning of a role that more and more people are assuming: that of the nontraditional student. The clarification of this role
provides insight to new definitions of reality that are being constructed by increasing numbers of older people as they engage in a social activity that has traditionally been associated with younger adults.

What is more, as more older people move between the major social institutions of occupation and education, they challenge what has been considered normative behavior for particular age groups. The outcomes of their educational achievement may re-define expectations of and for older adults, and, to some extent, the education institution.

Because the appearance of vast numbers of nontraditional students on college campuses is a relatively new occurrence, the outcomes of their experiences are relatively unexplored, making the topic rich for study. Sociologists interested in the interrelatedness of social mobility, work, occupation, and education might be guided in their research on these topics by Karl Mannheim who observed,

"It is not enough to provide educational opportunities; it is equally important that we should understand what kind of effects these educational opportunities are having."
LIST OF REFERENCES


APPENDIX A

Questionnaire
Listed below are some reasons people give for earning a college degree. Please read each reason and circle the extent to which it was a reason in your decision to earn a college degree. If it was not a reason, please circle the "0."

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not</th>
<th>Minor</th>
<th>Very</th>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter a new occupation.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Advance in occupational position.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Maintain occupational position.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Increase in salary.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Experience personal growth and development.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Meet new and interesting people.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Improve social status or prestige.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Please answer the following questions by using a check mark [ ], or fill-in your answers where requested.

8. Thinking back to that time before you first started attending UNI, which one of the following best describes your employment status prior to beginning your college studies? (Please check only one answer.)

[ ] Employed full-time (more than 30 hours a week)
[ ] Employed part-time
[ ] Member of the Armed Forces (Please skip to question 18 and continue.)
[ ] Seeking employment (Please skip to question 18 and continue.)
[ ] Not seeking employment (Please skip to question 18 and continue.)

Describe the best principal job you had prior to your graduation from UNI. (A principal job is the one from which you earned most of your income).

9. What kind of work did you do; what is your main occupation called (e.g., Registered Nurse, personnel manager, gasoline engine assembler)?

10. What were your most important activities or duties (e.g., patient care, directing hiring policies, assembling engines)?
11. In what kind of business or industry did you have this job (e.g. hospital, newspaper publishing, auto engine manufacturing)?

12. Which one of the following best describes the type of business or industry you specified above? (Please check only one answer.)

- [ ] Manufacturing
- [ ] Federal, state, or local government
- [ ] Retail trade
- [ ] Other (Please specify):
- [ ] Wholesale trade

13. Were you in a salaried position, paid by the hour, or self-employed?

- [ ] Salaried
- [ ] Paid by the hour
- [ ] Self-employed

14. Approximately how many hours did you work during an average week at this job?

   Hours per week

15. Approximately how years did you work for this employer? (If less than one year, please enter a zero (0).)

   Years

16. What were your total earnings before taxes for the last year of this job?

   $ (Before taxes)

17. What calendar year was this?

18. Were you employed during most of your final thirty (30) hours of course work prior to your graduation from UNI?

- [ ] Yes -- Employed full-time (more than 30 hours a week)
- [ ] Yes -- Employed part-time
- [ ] Yes -- A combination of both full-time and part-time employment
- [ ] No

19. In what year did you graduate from UNI?

20. What was your major at the time you graduated?

21. How many principal jobs have you had since graduating from UNI? (If none, please enter a zero (0).)

   Jobs

22. How many months elapsed between your graduation and your first new principal job? (If none, please enter a zero (0).)

   Months

23. How many months elapsed between your college graduation and your current principal job? (If none, please enter a zero (0).)

   Months

24. After your graduation from UNI, how would you describe your job search?

- [ ] Disappointing
- [ ] Frustrating
- [ ] Encouraging
- [ ] Gratifying
- [ ] Didn’t search for a job

25. What is your current employment status? (Please check only one answer.)

- [ ] Searching for employment
- [ ] Not searching for employment
- [ ] Student. (Please skip to question 44 and continue.)
- [ ] Employed -- Same employer as described in question 11 above.
- [ ] Employed.
26. What kind of work do you do; what is your main occupation called (e.g., Registered Nurse, personnel manager, gasoline engine assembler)?

27. What are your most important activities or duties (e.g., patient care, directing hiring policies, assembling engines)?

28. In what kind of business or industry is this job (e.g., hospital, newspaper publishing, auto engine manufacturing)?

29. Which one of the following best describes the type of business or industry you specified above? (Please check only one answer.)

- Manufacturing
- Federal, state, or local government
- Retail trade
- Wholesale trade
- Other (Please specify:)

30. Are you in a salaried position, paid by the hour, or self-employed?

- Salaried
- Paid by the hour
- Self-employed

31. Approximately how many hours do you work during an average week at this job? 

32. Approximately how many years have you worked for this employer? (If less than one year, please enter a zero (0).)

33. What were your total earnings before taxes for this job last year? $ 

34. Which one of the following statements best describes your current principal job? (Please check only one answer.)

- Temporary, until a better one can be found.
- Temporary, while waiting to report to a new job.
- Temporary, to earn money while I decide what kind of work I want.
- Temporary, to earn money for something else (e.g., travel, school, to have free time, to complete career preparation, etc.).
- A job with possible career potential.
- A job with definite career potential.
- Other (Please specify:)

35. To what extent is this job related to the area in which you majored when you graduated from UNI?

- Directly related (Skip to question 37)
- Somewhat directly related (Skip to question 37.)
- Not related (Please continue.)
36. What was the main reason you took a job not related to your major? (Please check only one answer.)

[ ] Could not find a job in my field.
[ ] The pay was better than for a job in my field.
[ ] Better opportunity for advancement than a job in my field.
[ ] Wanted to see if I liked this kind of work.
[ ] This is the job I held prior to completing my degree.
[ ] Better opportunity to help people or be useful in society.
[ ] Other (Please specify:)

37. How satisfied are you with your current principal job?

[ ] Very satisfied  [ ] Somewhat dissatisfied
[ ] Somewhat satisfied  [ ] Very dissatisfied

38. How would you compare your current principal job to other principal jobs you have had in the past?

[ ] A great improvement  [ ] About the same  [ ] Much worse
[ ] Somewhat of an improvement  [ ] Not quite as good

For the following items we would like you to compare your current job with the best job you had before or since you earned your college degree. Please read each of the following statements and circle whether you Strongly Agree (SA), Agree (A), are Undecided (U), Disagree (D), or Strongly Disagree (SD) with the statement.

39. My working conditions now are better than those at my best previous job. SA A U D SD

40. My work now is less challenging than that at my best previous job. SA A U D SD

41. I have more opportunity for advancement now than I did at my best previous job. SA A U D SD

42. My current job has higher social prestige than my best previous job. SA A U D SD

43. The people I work with now are more interesting than those at my best previous principal job. SA A U D SD

We would appreciate your answering the following background information questions.

44. What is your sex?  [ ] Female  [ ] Male

45. What was your age on your last birthday? __________

46. To which category do you feel you belong?

[ ] Alaskan Native  [ ] Black  [ ] White
[ ] American Indian  [ ] Hispanic
[ ] Asian or Pacific Islander  [ ] Other (Please specify:)

47. Since your college graduation, have you been willing to relocate for employment if necessary?  [ ] Yes  [ ] No

-- THANK YOU FOR PARTICIPATING IN THIS STUDY --
APPENDIX B

Cover Letter
(First Mailing)
August 9, 1989

Dear UNI Graduate:

We are conducting a survey of students who have graduated from UNI within the past five years. The purpose of the study is to ascertain employment opportunities for "nontraditional" students, that is, individuals who graduated from college when they are 25 years old or older. Information of this type is available for the overall college population but not for nontraditional students. Your name was selected at random from a list of recent graduates for inclusion in our study.

We would appreciate your completing the enclosed questionnaire and returning it in the postage-paid envelope provided. Your answers are confidential and will be used only in combination with answers from other respondents. A code number is printed on the last page of the questionnaire. This number will only be used to send out follow-up letters, if necessary. You will not be personally identified in any way in this study.

Because you are a recent graduate, we believe you are in a unique position to provide us with valuable information regarding employment opportunities and related matters which will be of benefit to current undergraduate and graduate students. We value your thoughts and opinions on this topic, and we appreciate your completing and returning the questionnaire.

Sincerely,

Mary Ellen Wacker
Project Director

Enclosures (2)
APPENDIX C

Reminder Postcard

(Second Mailing)
Dear UNI Graduate,

We are conducting a study to ascertain employment opportunities for individuals who graduate from college when they are 25 years old or older. Your name was selected at random from a list of recent UNI graduates for inclusion in this study, and a questionnaire was recently mailed to you. If you have returned it, thank you for your response. If you have not replied, we encourage you to do so. Your participation in this study is very important.

Thank you.

Mary Ellen Wacker
Project Director
APPENDIX D

Cover Letter
(Third Mailing)
Dear UNI Graduate:

We are conducting a survey of students who have graduated from UNI within the past five years. The purpose of the study is to ascertain employment opportunities for individuals who graduate from college when they are 25 years old or older. Your name was selected at random from a list of recent graduates for inclusion in our study.

A questionnaire was mailed to you in August. If you have returned it, thank you for your response. If you have not replied, another copy of the questionnaire is enclosed. Because your participation in this study is very important, we would appreciate your completing the questionnaire and returning it in the postage-paid envelope provided.

We value the information you are able to provide regarding employment opportunities and related matters. We appreciate your completing and returning the questionnaire by October 1, 1989.

Sincerely,

Mary Ellen Wacker
Project Director

Enclosures (2)
APPENDIX E

Questionnaire Items Related to Information Presented
**Questionnaire Items for Hypotheses Testing**

### Part I: Demographics

- Q8 work prior to college
- Q18 work during college
- Q19 major
- Q24 work since college
- Q43 sex
- Q44 age
- Q45 racial or ethnic background
- Q46 geographic mobility

### Part II: Expectations and Outcomes

<table>
<thead>
<tr>
<th>Expectations</th>
<th>Items</th>
<th>Attainment of Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 new occupation</td>
<td>Q9-Q12 previous occupational code</td>
<td>new occupational code ≠ previous code</td>
</tr>
<tr>
<td></td>
<td>Q25-Q28 new occupational code</td>
<td></td>
</tr>
<tr>
<td>Q2 advance in</td>
<td>Q9-Q12 past SEI</td>
<td>new SEI &gt; previous SEI</td>
</tr>
<tr>
<td>occupation</td>
<td>Q25-Q28 new SEI</td>
<td></td>
</tr>
<tr>
<td>Q3 maintain</td>
<td>Q9-Q12 previous occupational code</td>
<td>new occupational code = previous code</td>
</tr>
<tr>
<td>occupation</td>
<td>Q25-Q28 new occupational code</td>
<td></td>
</tr>
<tr>
<td>Q4 increase</td>
<td>Q17 past earnings manually transformed to adjusted income Q32 current</td>
<td>current earnings &gt; past earnings</td>
</tr>
<tr>
<td>salary</td>
<td>earnings</td>
<td></td>
</tr>
<tr>
<td>Q5 personal</td>
<td>Q39 challenging work</td>
<td>responses of 'D' or 'SD'</td>
</tr>
<tr>
<td>growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6 meet people</td>
<td>Q42 interesting co-workers</td>
<td>responses of 'A' or 'SA'</td>
</tr>
<tr>
<td>Q7 prestige</td>
<td>Q41 higher prestige</td>
<td>responses of 'A' or 'SA'</td>
</tr>
</tbody>
</table>
Part III: Mobility

Hypothesis 1: Nontraditional graduates with work experience do not find jobs of higher status than the jobs they held before earning their college degree.

\[ H_0 \text{ new SEI} > \text{previous SEI} \]
\[ H_1 \text{ new SEI} \leq \text{previous SEI} \]

Q9-Q13 previous occupational code and corresponding SEI manually assigned

Q26-Q27 current occupational code and corresponding SEI manually assigned

Part IV: Employment characteristics

1. Labor force participation

Hypothesis 2: A lower proportion of nontraditional graduates will have obtained jobs within one year of graduation than members of the overall graduate population.

\[ H_0 \mu = \bar{x} \]
\[ H_2 \mu > \bar{x} \]

\( \mu \) = proportion of those in national sample reporting that they were employed one year after graduation

\( \mu = 72.8 \) (Greene 1989)

\( \bar{x} \) = proportion of UNI nontraditional graduates reporting they were employed one year after graduation

Q21 employed full-time one year after graduation

2. Job fit

Hypothesis 3: A lower proportion of nontraditional graduates will perceive that their occupations are related to their major field of study than will members of the overall graduate population.

\[ H_0 \mu = \bar{x} \]
\[ H_3 \mu > \bar{x} \]

\( \mu \) = proportion of those in national sample who reported that their current job is related to their college major

\( \mu = 78.4 \) (Greene 1989)

\( \bar{x} \) = proportion of UNI nontraditional graduates who
reported that their job is related to their college major
Q34 job related to major

3. Career potential

Hypothesis 4: A lower proportion of nontraditional graduates will perceive their jobs as having career potential than will graduates in the national sample

\[ H_0 \mu = \bar{x} \]
\[ H_4 \mu > \bar{x} \]

\( \mu \) = proportion of those in the national sample who reported their job has career potential
\( \mu = 66.9 \) (Greene 1989)

\( x \) = proportion of UNI nontraditional graduates who reported that their job has career potential

Q33 describe current job

Tables and Corresponding Questionnaire Items

Table 1 Q43 Q44
Table 2 Q1-Q7
Table 3 Q5 by Q39
Table 4 Q9 \ne Q25 controlling for Q1
Table 5 Q6 by Q42
Table 6 Q25 > Q9 controlling for Q2
Table 7 Q7 by Q41
Table 8 Q7 by Q41 controlling for Q25
Table 9 Q3 by Q9 Q25
Table 10 Q9 Q25 Q44
Table 11 Q9 Q25
Table 12 Q21 by Q44
Table 13 Q21 by Q44 controlling for Q43
Table 14 Q34 by Q44
Table 15  Q34 by Q44 controlling for Q43
Table 16  Q33 by Q44
Table 17  Q33 by Q44 controlling for Q43
APPENDIX F

Pre- and Post-Graduation Distributions of Occupations According to Census Bureau Major Occupational Groups
<table>
<thead>
<tr>
<th>Occupational Groups</th>
<th>Pre-graduation Occupation</th>
<th>Post-graduation Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Executive, administrative and managerial</td>
<td>18</td>
<td>9.9</td>
</tr>
<tr>
<td>Professional specialty</td>
<td>17</td>
<td>9.3</td>
</tr>
<tr>
<td>Technicians and related support</td>
<td>12</td>
<td>6.6</td>
</tr>
<tr>
<td>Sales</td>
<td>19</td>
<td>10.4</td>
</tr>
<tr>
<td>Administrative support including clerical</td>
<td>39</td>
<td>21.4</td>
</tr>
<tr>
<td>Private household</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Protective service</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Service except protective and household</td>
<td>23</td>
<td>12.6</td>
</tr>
<tr>
<td>Farming, forestry, and fishing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision production, craft, and repair</td>
<td>21</td>
<td>11.5</td>
</tr>
<tr>
<td>Machine operators, assemblers, and inspectors</td>
<td>11</td>
<td>6.0</td>
</tr>
<tr>
<td>Transportation and material moving</td>
<td>6</td>
<td>3.3</td>
</tr>
<tr>
<td>Handlers, equipment cleaners, helpers, and laborers</td>
<td>16</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Note: \[ n = 182 \quad n = 166 \]