

**EMPLOYMENT EXPERIENCES OF  
UNIVERSITY OF MINNESOTA  
TWIN CITIES CAMPUS UNDERGRADUATES**

**University of Minnesota**

**June 17, 1991**

EMPLOYMENT EXPERIENCES OF  
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University of Minnesota

June 17, 1991

## Preface

Although statistics can tell an important story about how employment experiences affect undergraduates, they cannot portray the individual experiences of the 2,609 undergraduates who responded to the survey. The following are illustrative comments volunteered by students after they completed the survey:

"Even if working during school can sometimes adversely affect your grades, it also helps you develop your abilities to handle stress, a lot of responsibility, as well as broadens your horizons, allowing you to interact with people. Over time this has a stabilizing effect for many people so that they actually perform well both academically and in their work environment. That is, they learn to do both because of their learned responsibility, and thus learn to manage both work and school in harmony."

"It is necessary to both work and attend college—one without the other is an incomplete education. But it is difficult to excel at academics when you have to juggle work and family and relationships and other responsibilities. If we all experienced academic life in a vacuum we'd all get A's, but in real life things get in the way of studying and paper writing. Some professors realize this and some don't ... oh well. Fortunately the sun continues to rise and set even when work and school conflict."

"I feel that it is good for a student to work a few hours a week being that it helps one to better manage their time. I also feel the University could do more to help students who have to work near full-time hours and drop classes or do work in classes which is below their capability in order to remain in school. From my experiences here thus far, my impression is that the U of M has become more of a financial institution and has forgotten its original purpose of education."

"Working and attending school at the same time makes me worry more about how I'm going to pay for school the following quarter than how well I am doing in school. I have decided to quit working until I graduate, which means I am taking out loans that must be repaid. I plan on being quite in debt, not because I want to, but because I have to, for I have no other choice but to pay for my education in this fashion, and this makes me angry."

"The higher my educational expenses get, the harder I will have to work to make ends meet. The financial aid guidelines and other similar rules should be relaxed to include higher family income students. Just because a student's parents make \$150,000 a year does not mean that the student will see any of it at all. The worst thing you can do is assume this. It makes us all work harder, and in turn deprives us of our youth."

"I feel that students should not be expected to pay for public education if they can't do so without working. Yes, that would mean higher state funding but it's a matter of priorities both for the students and for our state."

"I think my main concern is to be able to pay for my tuition and other expenses such as housing, food and transportation. Being a full time student and having to work will definitely affect school performance. I personally think that the government should pay for full time students."

"I have found that working outside of school many times makes me impatient—hoping to get school over with. The reason I feel this way is because I have had to bypass opportunities for advancement due to conflicts with my school schedule. I know how important a degree is but sometimes it is hard to 'stick it out' the whole five years. I also regret that I cannot be more involved in school activities and clubs because they only meet during the afternoon when I work."

"It is almost impossible to take four classes to keep up with credits to graduate in four years—which is certainly next to impossible if you have to work to pay for school."

"Without working during summer vacations, it would not be possible to attend school without taking out more loans and getting further in debt. I feel I borrow enough and make ends meet. But I feel negatively towards working through school. Less study time in my difficult program of study would result in lower grades and less free time."

"Work has had a positive effect on my school career. It has given me a sense of accomplishment that school sometimes doesn't."

"It is important to note that for my career choice, work outside (practical experience) is crucial towards securing a job following graduation."

"I think I would actually miss work if I were to become a full-time student. It took a couple of years to work out a fairly good balance. I've been going to college since Fall of '82, two years full-time elsewhere, almost one year off (due to the death of my father), part-time with quarters off here and there due to finances and burn out. I am more than ready to finish, but have had difficulties getting classes I need in sequence due to time offered and work schedule."

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EMPLOYMENT EXPERIENCES OF  
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Executive Summary

This study was undertaken to provide information about student employment, academic progress and academic success of students on the Twin Cities campus of the University of Minnesota. Data were merged from three sources: a survey of a large sample of undergraduate students that asked if they were employed, where and why they work, and the positive and negative aspects of their employment experiences; information from student records about academic performance and progress; and data about income and budget from those who had applied for financial aid.

In the Spring of 1990 surveys were mailed by the Minnesota Center for Survey Research to a random sample of 3,607 undergraduates enrolled on the Twin Cities campus. A total of 2,634 surveys were completed and returned for a response rate of 75 percent. Financial aid data were available for 55 percent of the survey respondents.

We found that undergraduates are heavily involved in paid work while attending the University: 83.3 percent worked during the academic year and the average student spent 17.9 hours a week in paid employment. Moreover, comparisons indicated that as year in school increased, so too did involvement in paid work experiences: 79 percent of the freshmen worked compared to 88 percent of the seniors (average hours worked per week for each total group of students were 15.2 hours and 19.6 hours, respectively).

There is considerable variation in the number of hours students were employed during an average week: 0 hours (22%), 1-10 hours (11%), 11-20 hours (30%), 26-30 (22%), 31-40 (12%), and more than 40 hours (4%). Previous research on the relationship between the number of hours worked and academic success and progress has suggested that negative effects are more likely if students work more than half-time. Establishing the exact point at which negative effects become more prevalent is very difficult, since students differ considerably in how much they can work and still maintain reasonable academic performance. Results of this study, summarized below, suggest negative effects for the total number of credits completed, but little direct impact of employment on grade point average.

Results also indicated differences in work involvement as a function of college of enrollment. Colleges with lower percentages of employed students were: Education (72%), IT (75%) and Health Sciences (77%). Colleges with higher percentages of employed students were: CBS (93%), Agriculture (92%), and Architecture and Landscape Architecture (90%).

As a group, our undergraduates are very busy. In an average week they spend 17.9 hours working, 12.4 hours attending classes, and another 15.8 hours studying. We should not be surprised to find, then, that the average student reported only 2.3 hours per week on University extracurricular activities, and that 61 percent noted that tiredness is a negative aspect of their multiple roles.

Most students do not develop new employment patterns upon entry into the University, but are continuing established patterns of combining work and school responsibilities. Of the respondents to the survey, 70 percent worked while they were in high school. Students who worked while in high school were more likely to work while attending the University, worked more hours, and were more likely to use their income to pay for college and living expenses.

Students who are employed are more likely to work off campus than on campus, although on-campus employment was reported by 27 percent of the respondents. There were no differences between on-campus and off-campus jobs relative to hourly salary, job satisfaction, or school and work conflict. Students who worked on-campus were slightly more satisfied with their University experiences than students who worked off campus, spent more time studying and had a slightly higher GPA (2.9 vs 2.8, respectively).

The percentages of students employed in each of several job categories were as follows: service (27%), clerical (22%), sales (18%) and professional (17%). As year in school increased, students were more likely to report holding jobs in areas more closely related to probable career choices, and reported higher hourly salaries. Average hourly salaries ranged from \$5.68 for sales jobs to \$8.87 for professional/managerial jobs. Average hourly wage for freshmen was \$5.79 and for seniors it was \$7.43. The average hourly salary for all employed students was \$6.91.

As a group, students reported levels of job satisfaction that were comparable to their satisfaction with their University experiences. The mean for job satisfaction was 4.4 and for their University experiences it was 4.5; both means were between "satisfied" and "moderately satisfied" on the six-point scales. Students had higher levels of job satisfaction for aspects such as flexibility of work hours and relationship with co-workers, and slightly lower levels of satisfaction for contribution to overall career plans and opportunity to use skills and abilities. Overall job satisfaction was most highly correlated with nature of job duties, recognition for the work you do, opportunity to use your skills and abilities, and opportunity to learn new things, suggesting that these four dimensions are the most important contributors to overall job satisfaction for employed undergraduates.

Students indicated both positive and negative effects of working while attending the University. Most frequently mentioned negative effects were as follows: tiredness (61%), not done as well as I wanted (58%), and insufficient time to study for exams (53%). Most frequently mentioned positive effects were as follows: increased my ability to work with other people (68%), helped me to manage my time more effectively (55%), and made me take more personal responsibility for my work (50%).

Students experienced some stress in trying to combine school and work responsibilities. In response to three items concerning conflict between school and work, students reported that they occasionally had conflicts and that the intensity of the conflicts was "mild" or "moderate." Students who experienced more conflict tended to have slightly lower grade point averages and to complete fewer credits each quarter than students who experienced less conflict between their school and work responsibilities.

Results of this study provided some insights into why students work. Their responses to a series of questions about why they work indicated that paying for tuition and related educational expenses are the two most important reasons for working. Other highly rated reasons were to learn new skills and to have extra money if needed. The finding that the average student allocated 32 percent of available financial resources to tuition and another 23 percent to room and board lends further support to the role of paid employment in covering direct and indirect educational expenses.

Many students reported that they could not attend the University if they were not working: 25 percent had a major concern about financing their education, and were not sure they will have sufficient funds to complete their education. Fourteen percent have dropped out for one or more quarters for the purpose of earning more money to continue school, and 53 percent said they would not be able to attend the University if they were not working. Forty-two percent reported that they received no financial support from parents, relatives or friends, suggesting that a substantial percentage of our undergraduates are financially independent.

Findings from the analysis of the relationship between work experiences and indicators of academic success and progress were consistent with students' opinions about the negative effects of working. Although there was a slight negative effect on grade point average, there was a dramatic impact on quarterly credits completed. The correlation between hours in paid employment and overall University grade point average was  $r = -.19$ , suggesting that a small percentage of the variation in performance can be accounted for by involvement in employment experiences. For spring quarter 1989, the average number of credits completed as a function of number of hours of paid work were as follows: 0 hours worked, 11.5 credits; 1 to 10 hours worked, 11.3 credits; 11 to 20 hours worked, 10.6 credits; 21 to 30 hours worked, 10.2 credits; and more than 30 hours worked, 7.6 credits. Although working while attending the University has only a slight impact on academic performance, it certainly adds to the number of quarters students are enrolled before they complete a degree. If two



assumptions are made (i.e., that students continue their registration patterns and that they need 180 credits to graduate), students who do not work will graduate in 16 quarters whereas students who work more than 30 hours a week will graduate in 24 quarters. But working does not account by itself for the low mean number of quarterly credits completed, since students who were not employed completed an average of only 11.5 credits spring quarter 1989.

Financial aid variables added yet another dimension to the study for that subset of students (55%) for whom financial aid data were available. Compared to the larger group of students for whom both survey data and academic performance data were available, students in the financial aid data base were similar in terms of overall descriptive statistics. The mean students' adjusted gross income was \$7,104 and the median was \$4,967; the mean student budget was \$9,087. Most students would prefer to have a loan (62%) or work combined with a loan (20%), rather than rely only on income from employment (18%). Loans were offered to about 69 percent of those who applied, and grants were offered slightly less frequently. Scholarships were less likely to be offered (20%), and other types of aid were less frequent (work aid offers, VA benefits or tuition waivers). Students in the total aid offered categories (\$100 - \$3,100, \$3,101 - \$5,500, and \$5,501 and above) differed in remaining unmet need: as total aid increased, unmet need decreased. There was no difference among the three categories in total hours employed.

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We have several assumptions about the characteristics of the University of Minnesota and its undergraduate population, and how those characteristics affect the undergraduate experience on the Twin Cities campus. The University is an international research institution located in a large metropolitan area, and offers hundreds of degrees. Our students are likely to attend the University because of the reasonable cost, the convenient location and the diversity of our offerings. They commute to campus, and take more than four years to receive a baccalaureate degree. We also know that many of our undergraduates divide their attention between school and employment, and that this reality influences their academic success and satisfaction.

This study was undertaken to learn more about how much time our undergraduates spend working while they attend school, where and why they work, and the positive and negative effects of those employment experiences. The purpose for doing the study was to provide a basis for subsequent discussions about how our institutional practices and policies regarding student employment affect the academic success and progress of our undergraduates.

Before we briefly describe how the study was designed, an overview of related literature is necessary to put our findings within an appropriate context. This background information is summarized in several general areas: national statistics on college student employment, how employment experiences contribute to subsequent career decisions, motivations that lead to students' decisions to work while attending college, previous research on how work affects academic progress and success, and recent theoretical and empirical work that concerns the effects on individuals of being in situations in which they must fulfill multiple roles. And finally, we will describe current initiatives to improve undergraduate education and summarize relevant previous studies that have touched on the employment experiences of University of Minnesota undergraduates.

National Statistics on College Student Employment

National statistics suggest that the frequency and amount of college students' employment while in college has increased. The Carnegie Foundation for the Advancement of Teaching (1984) indicated that 23.5 percent worked full time and another 38.8 percent worked part time. The 37.7 percent who did not work were more likely to be students in research universities. The report further suggested that the increases were due, in part, to the well-documented increases in the number of part-time students and to adults returning to college (McCartan, 1988).

Another indication that college students are working more comes from research conducted by UCLA's Higher Education Research Institute for the Cooperative Institutional Research Program (Astin, Korn, & Berz, 1989). The Freshman Survey is administered to new students each fall at hundreds of colleges and universities across the country. Over half (51.3%) of entering freshmen for fall 1989 indicated that the chances were very good that they would need to get a job to pay expenses. (A subsequent section of this review presents these statistics for freshmen who started on the Twin Cities campus of the University fall quarter 1989.)

Some argue (Topolnicki, 1986) that the increases in college student employment are a direct function of the increases in costs to attend college. As an alternative to encouraging borrowing (Hansen, 1986; Stickney, 1988) and in view of less parental willingness to provide total financial support during the college years, colleges and universities have developed extensive student employment opportunities. According to an article in Change magazine (May/June 1986), there is considerable variability in the emphases (Christoffel, 1985) of student employment programs in our nation's colleges and universities. The article further states that there are no data at the national level and no consensus about actions to be taken, but encourages individual institutions to study their particular situation in detail.

Higher education institutions can and have taken steps to deal with the increasing work experiences of college students. McCartan (1988) suggests five possibilities: establish more internship and cooperative education programs, rejuvenate existing work programs, improve the quality of college-funded work experiences, increase career planning and placement services, award credit for work experiences, and encourage faculty to incorporate work experiences into class discussions.

#### Contribution of Work Experiences to Career Decisions

One of the important goals for attending college is to obtain educational experiences that will serve as the basis for satisfying and productive employment after graduation. Students come to college with varying degrees of sophistication about the world of work, and employment while in college can play a valuable role in helping students test their vocational needs, interests, and abilities. The vocational education movement (Kliebard, 1990) has been instrumental in encouraging policies that connect education with the workplace, but also may be one of the forces leading to the increasing work involvement of high school and college students.

Considerable recent research (e.g., Werner, 1989; Stern & Nakata, 1989; Stern & Eichorn, 1989; Schulenberg, Vondracel, & Hostetler, 1989) points to increasing work experiences and changing work values in our nation's adolescents. Stern and Eichorn suggest that our changing social structure and culture, together with labor demands, account for the increases in adolescent employment. Hansen and Johnson (1989) find that our schools play a powerful role in preparing students for the world of work, but that our schools do not foster

appropriate orientations (e.g., dependability) that are important to corporate employers. Mainquist and Eichorn (1989) suggest that adjustment and success in a variety of work settings helps adolescents make successful transitions from school to work.

Although significant percentages of students have had employment experiences by the time of graduation from high school, the quality of the work experience often suffers. Stern and Nakata (1989) analyzed employment experiences as reported in the National Longitudinal Survey of Youth. They used five dimensions in studying the characteristics of teenage jobs: rights and compensation, motivation potential, skill use and development, physical comfort, and social contact. They characterized the typical teenage job as "economically rich but psychologically poor." Their finding that having jobs that provided opportunities to use and develop skills was positively correlated with success in the job market after high school graduation, suggests the need for more complex jobs for teenagers.

Given that employment experiences for high school and college students can play an important role in subsequent career decisions, what seems to be lacking are guidelines for counselors, students and their parents, and faculty to use in helping students clarify the value of a particular work experience. Hamilton (1989) proposed four dimensions as the basis for evaluating out-of-school learning environments: mentor's role, learner's role, content of work, and structure provided. Since interpersonal skills and motivation are important determinants of work success (Klemp, 1977) but are not often dealt with in college, work experiences can provide additional valuable feedback to students.

#### Reasons for Working While Attending College

Although the above discussion suggests some of the motivations that lead to students' decisions to work while attending college, other motivations need to be taken into account to get a fuller picture of why students work and the possible results of work experiences. Research by others quoted in McCartan (1988) suggests that only 57 percent of college students worked only to save money. Other motivations included developing self confidence, organizing time, having fun, and developing close friends. Instruments exist to measure work values and motivations (e.g., Pryor, 1984), but relatively few studies have examined the work values and motivations of college students in general.

Clearly, the increasing costs of college, the increasing attendance rates of part-time and adult students, and the increasing vocationalism all have contributed to the increases in the numbers of students who are employed while attending college. Other changes in students' values also are likely to account for some of the changes. This sentiment is well-summarized in the following quotation from McCartan (1988):

But there is a sense on campus that something else -something new- lies behind the student work phenomenon. On-campus jobs have long provided students with

employment, but somehow they seem less threatening than the jobs that now take students away from campus. . . . Perhaps the uneasy feelings derive from lingering images of the college years shared by those who teach and work in higher education, images quite at variance with the realities of today's students' world. (p. 12)

An article in the Minnesota Daily (Houlton, 1990) last year suggested some of these other motivations that influence students' decisions to work while attending college. The need for cars, stereos, vacations, and expensive entertainment compete with those costs directly related to attending college. According to the article that was based on a 1989 survey by CollegTrack, a New York research foundation, our nation's college students have a combined personal buying power of \$32 billion and discretionary income of \$6 billion.

#### Effects on Academic Success and Progress

A primary concern of those alarmed by the increasing employment rates of college students involves the effects of employment on academic success and progress. Clearly, today's college students have different values than those of previous generations of college students. Whether or not academic success, including graduation rate and time to graduation, is related to students' employment experiences is an empirical question that can be addressed with appropriate data. Although several studies have been conducted within the last decade or so, the results are mixed in their conclusions.

In the book Preventing students from dropping out, Astin (1975) addressed how employment experiences affected retention rates. Astin's conclusions were as follows: on-campus employment encouraged student persistence and increased students' chances of finishing college; type of work experience was irrelevant; off-campus jobs were negatively related to persistence; and working more than 20 hours a week had a negative effect on persistence. The theory behind the positive results for on-campus experiences is that being employed on campus helps students to identify with an institution.

Two other empirical studies focused on additional measures of academic success. Ma and Wooster (1979) studied 374 full-time juniors and seniors and found that employment status and type of employment affected grade point average. Working more than 15 hours a week and working in blue collar jobs were associated with poorer academic performance. Hood and Maplethorpe (1980) concluded that working had no impact on achievement, although its effect on persistence varied as a function of number of hours, on-campus versus off-campus location, and gender of students.

Ehrenberg and Sherman (1986) used a sample of 2,700 students in the national Longitudinal Survey of the High School Class of 1972 to study the relationship between employment and academic progress and graduation. Three major conclusions resulted from that national study:

working 25 hours a week or less did not adversely affect grade point average; students with on-campus employment were more persistent and more likely to graduate on time than students with off-campus employment; and working while in college did not relate to earnings after graduation.

If working while attending college affects academic success, one might wonder about the likely causes of poorer academic performance of students who work. One set of explanations concerns time factors, since research consistently suggests ( e.g., Frisbee, 1984; Pappalardo, 1987) that time allocated to a particular course correlates positively with course performance. One of Chickering and Gamson's (1987) "Seven principles for good practice in undergraduate education" is that good practice emphasizes time on learning tasks. A second set of explanations concerns individual difference factors that might be related to who works and who does not. If highly motivated, well-prepared students work less than their counterparts, then differences in academic performance as a function of employment are confounded with ability differences.

A recent examination of the Washington State Work Study Program (Augenblick, Van de Water & Associates, 1987) provides an excellent example of a detailed study of how working affects academic variables, although their study examined only full-time students in work-study programs who had received assistance from the financial aid office. Their conclusion was as follows:

The fundamental conclusion of the report is that work has no impact on the academic performance and very little impact on the academic progress of full-time undergraduate students in Washington's colleges and universities. Neither the number of hours worked nor the rate of pay has a strong impact on a student's grade point average, number of credits attempted, or the ratio of credits earned to credits attempted. For persistence, the working student, on average, will take slightly longer to complete college than the non-worker. Our estimate is that the additional time will be about one-third of an academic term. (p. v)

### Literature on Multiple Roles

Another line of research looks at issues of satisfaction and success for individuals who are expected to function in more than one primary environment. Although some recent work has focused on multiple role issues for today's college students (e.g, Chartrand, 1989), the majority of the multiple role literature concerns adults who are in multiple role situations (e.g., spouse, parent, employee).

This literature is considerably more social-psychological in its definition of variables than the research reviewed above. The assumption is that we need to study multiple environments in order to better understand the outcomes for individuals attempting to balance behaviors in two

or more environments. Role conflict, role strain, and role demand variables are used to understand how students' involvement in employment affects students' academic success and satisfaction.

Zedeck and Mosier (1990) presented five models that hypothesize how life at work and life at home interact: the spillover model (i.e., similarity in what occurs in both environments); the compensation model (i.e. inverse relationship between two environments); the segmentation model (i.e., two distinct unrelated environments); the instrumental model (i.e., one environment is the means by which things are obtained in the other); and the conflict model (i.e., environments are incompatible and success is possible in only one environment). This same model has equal relevance in looking at the phenomenon of working while attending college, and has the potential for adding new insights about college student employment.

An example of research that has examined the dynamics of work and school interactions is Mortimer and Yamoor's (1987) study of the impact of school and work on the psychological development of adolescents. They suggest that a better understanding of the "causal dynamics of the interrelations and parallels of school and work" is necessary for educators to counsel students concerning the combination of work and school experiences that will be developmentally beneficial to them. Implicit in their discussion is the need to examine individual and group differences in students who work while attending school.

#### Context and Previous Studies of University of Minnesota Students

During the past five years, several University of Minnesota reports (e.g., Task Force on the Student Experience, 1984; Report of the Committee on the Quality of Undergraduate Teaching and Learning, 1985; Special Committee on Minority Programs in Support of Commitment to Focus, 1987; Special Committee on Coordinating Lower-Division Education on the Twin Cities Campus, 1986; Final Report of the Implementation Task Force on Undergraduate Education on the Twin Cities Campus of the University of Minnesota, 1987; Bachelor's Degree Candidate Survey, 1989) have identified aspects of the educational experience of undergraduates, especially on the Twin Cities campus, that needed attention.

More recently, the President's Initiative for Excellence in Undergraduate Education (Hasselmo, 1990) has identified six initiatives to guide us in our efforts to improve undergraduate education: (1) Who should our students be and why? (2) How do we attract students and make it possible for them to attend and graduate? (3) How do we provide advising and counseling? (4) How do we assure quality teaching? (5) How do we provide a good learning environment? and (6) How do we create a sense of community. For each of these areas of concern, a piece of the solution involves looking at how students' employment experiences influence their experiences on the Twin Cities campus.

Statistics describing the graduation rates (Matross & Des Jardins, 1991) and years-to-baccalaureate degree (Kvavik, 1990) for University of Minnesota undergraduates suggest that 36.5 percent of entering fall 1984 freshmen on the Twin Cities campus graduate from the University within six years and that almost one-third of baccalaureate graduates (30.6%) took more than five years to complete their degree, respectively. Trends over the past decade in higher education generally, and the University of Minnesota in particular, indicate increases in the percentage of part-time students and decreases in the per quarter credit loads. The fact that the Twin Cities campus of the University of Minnesota had a substantial percentage of part-time students is one of the factors that correlates with graduation rates. Examining why students are part time involves looking at their other activities (e.g., paid employment) that consume part of their time and energy.

A comparison of the number of years it took for students to graduate, derived from a special analysis from the 1989 Bachelor's Degree Survey, showed that the mean number of years for both those who began at the University of Minnesota as new high school graduates and those who transferred into the University took about a half a year longer to graduate if they defined the extent of their working as a "very serious problem." For those who began after high school, it took 5.8 years to graduate if work interference was "not a problem" and 6.3 years if it was a "very serious problem." For transfer students the comparable mean number of years were 3.8 and 4.4, respectively.

There is widespread concern among University faculty and staff about the possible negative effects of holding a job while trying to be a student. Regents' Professor Emeritus John Turner, in a 1988 letter in the St Paul Pioneer Press Dispatch, noted some of the ways in which working affects school (e.g., students choosing courses to fit work schedules) and suggested that there was "a Minnesota ethic that after high school children must swim the stream by themselves." Recently collected data from the CIRP Freshman Survey supports this hypothesis.

The Freshman Survey of UCLA's Cooperative Institutional Research Project was administered to 1,860 entering freshmen on the Twin Cities campus fall quarter 1989. Comparisons between responses for our students and those of students at other "medium selective public institutions" were similar for most questions except for those involving issues of parental support, financial aid, and expectations to work while attending college (Hendel, 1990). Selected comparisons are as follows:



	Twin Cities Undergraduates	Comparison Institutions
Worked six or more hours for pay during year prior to starting college	71.4%	65.1%
High probability of getting a job to pay expenses	51.3%	38.6%
Received \$1500 or more in aid from parents/family	49.1%	62.0%
Parents characterized as deeply concerned about their children	66.0%	73.1%

One of the reasons for conducting the present study was to obtain current estimates of the frequency with which students work, where they work, and how much they work. Other recent studies have addressed this topic within the state of Minnesota, and several studies over a decade ago provide a basis for comparison for current University of Minnesota students.

The Minnesota Higher Education Board issued a report Work opportunities for students (1985) that compared work-study jobs to non-subsidized student jobs. Findings confirmed the expectation that employment played an important role in financing the post-secondary education of Minnesota students. On the average, work-study jobs paid less than other types of employment. Depending on the type of institution, work-study jobs accounted for between 6 and 34 percent of the jobs held by students. Students attending institutions in the Twin Cities area were more likely to be employed.

A more recent report by the Higher Education Coordinating Board of years-to- graduation suggests that increasing tuition costs force students who need to work to take

longer to graduate. Portions of the report dealt specifically with undergraduates on the Twin Cities campus and suggest that understanding why students take longer to graduate is a complex problem, only one part of which involves finances and employment experiences.

Studies done of Twin Cities undergraduates ( Stecklein, 1967; Pazandak, 1979; Harrold, 1986; Perry, 1989; Matross, DesJardins & Murdock, 1989; Moloney & Toomey, 1991) provide a further basis for interpreting results from the present study. Each is briefly summarized to get an historical perspective on whether our undergraduates are increasing their involvement in employment experiences.

Stecklein (1967) gathered information about individual levels of expenditure and sources of income for the 1965-66 academic year from 2,272 University of Minnesota students drawn from the Twin Cities, Duluth, and Morris campuses. He reported that the major source of income for students was their family: 76 percent received all or part of their funds from family or relatives, and 57 percent of the students worked. Men were more likely to work than women (61% vs 52% respectively), and the median number of hours worked was 17 hours per week. Almost one third thought that working seriously hurt their grades, but only 24 percent reported that they had applied for a loan, scholarship or grant. Only two percent of the students found it necessary to drop out of school for one or more quarters as a result of unexpectedly high costs. When asked to indicate how they would cover possible tuition increases, the most frequently named sources were additional contributions from family, working more at a present job, reducing expenditures, or taking a job.

Pazandak (1979) studied a group of College of Liberal Arts students to describe how working affected their academic experiences. Results were as follows; (1) 71 percent of the students worked, half of them worked more than 20 hours a week; (2) about half of the jobs reported by students were on or near campus; (3) one-third of the jobs were career related; (4) two-thirds of the students believed working in college was good preparation for life; (5) 55 percent of the students paid most or all of their own expenses; and (6) 62 percent of employed students believed working adversely affected their grades.

A counseling needs survey conducted by University Counseling Services (Perry, 1989) points to the level of student concern about financial matters. Along with time management and career choices, personal finances was one of the three concerns most frequently noted by students. Findings in this study were almost identical to the results of a similar study of counseling needs conducted in 1984.

The recently instituted Bachelor's Degree Candidate Survey, provides soon-to-graduate students with an opportunity to reflect on their undergraduate experience. Only a couple of items in that survey dealt with work-related questions. Results for spring 1989 graduates (Matross, DesJardins & Murdoch) indicated that about half of the students (41.9%) worked at a paid job on campus at some point during their years at the University, but did not address off-campus work experiences. Finally, the study by Moloney and Toomey (1991) indicated that CLA students who experienced a delay in degree completion worked more hours per week and contributed more of their own money toward their education.

## Study Design

The need to look at employment experiences in relation to academic performance and progress and financial aid variables required a three-part collaboration that involved the Minnesota Center for Survey Research, Data and Reporting Services, and the Office of Student Financial Aid. Data and Reporting Services assisted in generating the sample, in providing the academic performance and progress variables, and in merging data files. The Office of Student Financial Aid, in collaboration with Data and Reporting Services, suggested financial aid variables to include in the analysis. The Minnesota Center for Survey Research collected the survey data.

The population of interest for the present study consisted of undergraduates enrolled on the Twin Cities campus spring quarter of 1990. Data and Reporting Services generated a sample of 3,607 undergraduates, or approximately 10 percent of the enrolled undergraduates. The basic sample consisted of 18 percent freshmen, 22 percent sophomores, 25 percent juniors, and 35 percent seniors to reject the existing year in school distribution of students.

### Questionnaire Design and Data Collection

Two strategies were used to identify relevant questions for inclusion on the survey: (a) interviews with faculty and staff on campus with interest and expertise in students' work experiences; and (b) reviews of previous research, both at the University of Minnesota and at other institutions, that had explored students' work experiences. Several drafts of the survey were prepared and circulated before finalizing the survey instrument.

Appendix A contains a copy of the Undergraduate Survey that was used in the present study. The survey contained a set of introductory questions followed by four sections that dealt with the following topics: employment experiences during the current year (e.g., location, hours worked, salary, job satisfaction); perceived effects of work experiences (e.g., benefits and negative effects); personal finances (e.g., sources of educational support and educational loans); and descriptive characteristics.

The Minnesota Center for Survey Research was responsible for collecting the questionnaire data. Appendix B contains portions of the technical report (Uting, 1990) prepared by MCSR that describes the data collection procedures. Of the 3,607 surveys mailed, 2,634 were completed and returned. Another 14 students did not wish to participate, 50 had no current address, and 24 were eliminated because they were no longer undergraduates. The overall response rate was 75 percent.

Table 1 contains a summary description of the characteristics of the undergraduate students

Table 1

Descriptive characteristics of respondents  
to the Undergraduate Survey completed spring quarter 1990  
for undergraduates on the Twin Cities campus of the University of Minnesota

Question Response	N	%
Year in school	<u>2,549</u>	
Freshman	392	15.4
Sophomore	527	20.7
Junior	649	25.5
Senior	981	38.5
Gender	<u>2,609</u>	
Female	1,331	51.0
Male	1,278	49.0
Race	<u>2,526</u>	
American Indian	14	.6
Asian Pacific American	142	5.6
Black/African American	42	1.7
Hispanic (Chicano/Latino)	21	.8
Caucasian	2,307	91.3
International student status	<u>2,551</u>	
Yes	67	2.6
No	2,484	97.4
Highest degree expected	<u>2,539</u>	
I do not expect to complete any degree	13	.5
Associate (A.A. or equivalent)	12	.5
Bachelor's (B.A., B.S., etc.)	1,209	47.6
Master's degree (M.A., M.S., etc.)	911	35.9
Doctoral degree (PhD., EdD) or advanced professional degree (M.D., J.D., etc.)	394	15.5
College	<u>2,583</u>	
Agriculture	71	2.7
Architecture and Landscape Architecture	39	1.5
Biological Sciences	42	1.6
Dental Hygiene	8	.3

--Table 1 continued--

(Table 1 continued)

Question Response	N	%
Dentistry	1	—
Education	81	3.1
Extension	1	—
General College	121	4.7
Human Ecology	101	3.9
Liberal Arts	1,430	55.4
School of Management	94	3.6
Medical Technology	9	.3
Mortuary Science	7	.3
Natural Resources	37	1.4
Nursing	19	.7
Occupational Therapy	9	.3
Pharmacy	31	1.2
Physical Therapy	9	.3
Institute of Technology	443	17.2
University College	15	.6
Age <sup>a</sup>	<u>2,573</u>	
19 or younger	781	30.4
20 - 22	1,128	43.8
23 - 25	326	12.7
26 - 29	163	6.3
30 or older	175	6.8
Current life situation	<u>2,551</u>	
Single without child(ren)	2,243	87.9
Single parent	45	1.8
Married without child(ren)	149	5.8
Married with child(ren)	114	4.5
Residence	<u>2,554</u>	
Dormitory, university residence halls, fraternity/sorority house	558	21.8
With parents or relatives	621	24.3
Other	1,375	53.8

<sup>a</sup>The mean age was 21.9 (SD = 4.5).

who responded to the survey. Of the total sample of respondents, 15.4 percent were freshmen, 20.7 percent were sophomores, 25.5 percent were juniors, and 38.5 percent were seniors. Over half of the respondents (55.4%) were in CLA, and another 17.2 percent in IT. Approximately the same percentage of females (51.0%) and males (49.0%) responded to the survey. Fewer than one-tenth of the respondents (8.7%) were students of color. Almost all of the students expected to complete at least a bachelor's degree, and over half expected to complete an advanced degree. The mean age of respondents was 21.9 years.

#### Academic Performance and Progress Variables

In consultation with staff of Data and Reporting Services, a set of academic performance and progress variables were identified to relate to students' employment experiences. Since the study focused on employment experiences during the 1989-90 academic year, most of the variables of interest concerned academic performance and progress achieved during the 1989-90 academic year. Performance and progress variables were merged with survey data in the summer of 1990 after spring quarter grades had been incorporated.

Data and Reporting Services provided the following variables from the Active Student File: demographic characteristics, including high school rank and PSAT and ACT admissions test data; registration status; GPA variables fall 1989, winter 1990 and spring 1990; transfer GPA; and overall University GPA; and credits attempted and completed during fall quarter 1989, winter quarter 1990, and spring quarter 1990.

#### Financial Aid Variables

This study was able to benefit from the development of a recent financial aid data base that allows studies of the numerous financial aid variables that constitute a student's financial aid record.

After consultation with staff in the Office of Student Financial Aid, the following subset of financial aid variables was identified: aid year (1990 only); parent adjusted gross income; student adjusted gross income; aid offered; student budget; expected family contribution; gross need; unmet need; aid preference; federal dependent status; aid type provided and dollar amounts in each type.

#### Data Analysis

A tape containing all three types of variables was provided by Data and Reporting Services. Each record contained 734 columns of information. The SPSS program in the University's CYBER system was used to analyze the data.

Descriptive statistics were obtained for each of the items on the data file to ascertain those variables for which there was sufficient data to warrant further analysis (especially for the financial aid information). Appropriate bivariate and multivariate statistical procedures were used to address particular questions within and across the three types of variables.

Since not every student had a financial aid record, financial aid information was available for just 55 percent of the survey respondents. For those subsequent analyses that examined work experiences in relationship to financial aid variables, the analysis was based on this reduced sample of students.

## Results

This extensive and rich data base provided a smorgasbord of possible data analyses within and across the three data components: survey data on employment experiences, academic variables, and financial aid variables. The following three sections summarize primary analyses conducted within and between data sets. The first section describes students' work experiences, their perceptions of those experiences, and relationships between variables (e.g., differences between on-campus and off-campus employment). The second section examines survey responses in relationship to the academic performance and progress variables. The third section examines the relationships between work experiences and financial aid variables.

### SURVEY DATA ON WORK EXPERIENCES

Five types of questions were included in the survey: work history, current work experiences, perceived effects of work experiences, personal finances, and demographic characteristics.

#### Work History

Although the focus of the survey was on students' current work experiences, those work experiences must be understood within the context of students' previous work experiences. Since other studies have described the increasing work experiences of students while in high school, questions about prior work experiences in high school were included.

High school work experiences. Table 2 describes the percentages of students who worked during each of their four years in high school. Over two-thirds (69.9%) of the students reported that they had had a steady job at some point while in high school. Results also indicated a clear trend in increasing likelihood of working from the freshman to the senior year in high school. Data from the American Council on Education's Annual Cooperative Institutional Research Program (University of Minnesota data reported by Hendel, 1990) showed that University of Minnesota first-time full time freshmen were most likely to work

Table 2

High school work experiences of  
respondents to the Undergraduate Survey

Question Response	N	%
Steady job while in high school	<u>2,551</u>	
Yes	1,784	69.9
No	767	30.1
When worked		
High school freshman	428	16.3
High school sophomore	933	35.5
High school junior	1,512	57.5
High school senior	1,690	64.3



six or more hours in their last year of high school (71.4% reported 6 or more hours; 43.9% worked 16 or more hours; 19.5% worked no hours). As the results suggest, students enter the University with considerable paid work experiences that are likely to influence their work habits while attending the University.

Results contained in Table 3 compare students who did versus did not work at any time during their four years in high school on selected variables from other parts of the questionnaire. Significant differences were found for several of the questions on the survey.

Students who worked while in high school were more likely to work while at the University: the mean number of hours worked during the 1989-90 school year was higher, the mean number of jobs during their years at the University was higher, and the mean number of summer jobs was higher than students who did not work in high school.

Students who worked in high school differed from students who did not on four of the questions concerning reasons for working. Students who worked in high school rated the following reasons more highly than students who did not: pay for college expenses, cover living expenses, have extra money, and buy things for myself.

Finally, students who worked while in high school expressed higher levels of conflict between current school and work commitments than did students who did not work at any time while in high school.

Decision to enter the University. Some have speculated that the opportunity to get a part-time job at the University is a factor that leads some students to decide to enroll on the Twin Cities campus. As the results in Table 4 suggest, only a small percentage of students (6.2%) endorsed this as one of their reasons for deciding to attend the University. Responses to other questions were similar to responses obtained in other studies that have included questions about factors important to students in deciding to enroll at the University. Location in a large metropolitan area, the high quality of the University's programs, and the (presumably relatively low) cost of attending the University were the most frequently checked factors. Thirty eight students wrote in "other" factors. The most frequently mentioned was that it was close to home (N=14).

Previous quarters and jobs. Although the survey did not ask students to provide detailed job histories, they did indicate the number of quarters they had worked and the number of different jobs they had held while at the University.

For the total sample of respondents, the mean number of quarters they had worked while attending school was 5.1 quarters, as reported in Table 5. Of more relevance are the figures for each of the four year-in-school groups. Freshmen had worked almost two quarters, sophomores three quarters, juniors five quarters, and seniors eight quarters. These findings suggest that students current work experiences reflect a pattern over time of working while attending classes.

Table 3

Comparisons between students who did and did  
not work in high school in response to work related variables

Variable	High school work experience					
	Worked		Did not		t	
	N	x	N	x		
Hours work M to F	1,782	14.2	766	11.0	6.57***	
Hours work weekends	1,779	5.2	764	3.2	7.71***	
Total hours paid work	1,779	19.4	764	14.2	9.08***	
Current job satisfaction	1,546	4.4	547	4.4	.14	
Work to pay for college expenses	1,658	3.8	632	3.4	4.95***	
Work to cover living expenses	1,658	4.0	633	3.9	2.96***	
Work to feel competent	1,655	2.8	627	2.7	1.82	
Work to enhance reputation	1,632	1.7	624	1.7	.21	
Work to have extra money	1,644	3.4	629	3.2	3.50***	
Work to buy things for others	1,644	2.5	629	2.5	.58	
Work to buy things for myself	1,656	3.4	633	3.3	3.08**	
Work to learn more skills	1,653	2.8	632	2.9	-1.76	
Work to help with career decisions	1,653	2.7	632	2.7	-.39	
Work to be involved	1,654	2.5	631	2.5	-.16	
Work to manage time better	1,655	2.3	631	2.3	-.51	
Total jobs while attending	1,654	4.8	630	4.4	2.84**	
Total school year jobs	1,639	2.6	635	2.4	2.74**	
Total summer jobs	1,655	2.1	631	2.0	2.15*	
School/work conflict	1,638	10.0	625	9.3	4.55***	

\* p < .05  
\*\* p < .01  
\*\*\* p < .001

Table 4

Factors important in Undergraduate Survey respondents'  
decisions to enter the University of Minnesota

Factor	N	%
Location in a large metropolitan area	1,436	54.6
Size of the University	712	27.1
High quality of the University's programs	1,341	51.0
Opportunity to get a part-time job at the University	163	6.2
Cost of attending the University	1,302	49.5
Scholarship and financial aid offered to me	503	19.1
Reputation of the University	1,214	48.1
Only school in geographical area that offers my major	440	16.7

Table 5

Quarters of work history, by year in school, for  
respondents to the Undergraduate Survey

Number of Quarters	Year in School				
	Total(N=2,597) % x	Freshman x	Sophomore x	Junior x	Senior x
Quarters worked 40 hours or more at paid job while attending school	.7	.2	.4	.7	1.2
0	81.1				
1	4.6				
2	4.1				
3	3.8				
4	.9				
5 or more	5.5				
Quarters worked less than 40 hours at paid job while attending school	5.1	1.8	3.3	4.9	7.6
0	16.9				
1	5.1				
2	7.9				
3	19.3				
4	4.4				
5 or more	46.4				
Quarters dropped out of school to work full time at a paid job	.4	.1	.4	.6	.6
0	86.3				
1	5.4				
2	2.4				
3	2.0				
4	.8				
5 or more	3.1				
Quarters took night courses to accommodate work schedule	.8	.2	.4	.8	1.4
0	70.7				
1	10.1				
2	7.2				
3	4.9				
4	2.2				
5 or more	4.9				

\*Question posed to students was "How many quarters, including the current quarter, have you done each of the following while a student at the University of Minnesota?" Students were instructed to exclude summer session.

Some students drop out of school to work full time and then return to the University. Of the total sample, 13.7% indicated that they had dropped out for one or more quarters to work full time at a paid job. Seniors and juniors were most likely to indicate that they had dropped out to work full time. In addition to registering for fewer credits, students who work lengthen their time to graduation because of a tendency to drop out for one or more quarters to work.

Sometimes, students' work schedules do not enable them to take courses in day school. Over one-fourth of the respondents indicated that they had taken courses in night school for one or more quarters to accommodate their work schedules.

Students were asked to indicate the total number of different jobs that they had held since they started at the University: jobs at the University while attending classes, off-campus jobs while attending the University, jobs at the University during the summer, and off-campus jobs during the summer. As the results in Table 6 indicate, students reported almost identical work involvement while attending classes versus during the summer. For both summer jobs and jobs while attending classes, students reported more involvement in jobs off campus than on campus. As a group, students have had experiences in more than one job, and not surprisingly, as year in school increases, students have had a larger number of different jobs.

### Current Work Experiences

One set of items on the survey asked students to describe their current work experiences. In addition to indicating whether or not they worked, students also indicated how many hours they worked, the location of their job, the type of job, how long they had been in the job, their hourly salary, and their job satisfaction.

Work status. The simplest question about current work experiences was in response to the question "Have you worked for pay at any time since classes started fall quarter 1989?" As the results in Table 7 indicate, most undergraduates (83.3%) had worked for pay sometime during the school year. The percentages who had worked increased as year in school increased: 74.5 percent of the freshmen had worked in comparison to 87.5 percent of the seniors. For all job locations except campus work-study (which tended to be most frequently noted by freshmen) as year increased, so also did the likelihood of working.

Hours worked. Another way to look at undergraduates' involvement in work is to examine the number of hours they spend working in relationship to the number of hours they spend in other activities (e.g., studying and attending classes). Table 8 describes the number of hours spent in paid work in relation to the number of hours spent in each of six other activities. The average undergraduate spends almost 18 hours a week in paid employment, and more time is spent working during the week than on the weekend. By way of contrast,

Table 6

Number of different paid jobs, by type and when held, since respondents to the Undergraduate Survey started at the University of Minnesota, by year in school<sup>a</sup>

Type Number	<u>Total</u> x	<u>Year in School</u>			
		<u>Freshman</u> x	<u>Sophomore</u> x	<u>Junior</u> x	<u>Senior</u> x
University jobs while attending classes	.9	.6	.7	.9	1.1
Other jobs while attending classes	1.7	1.0	1.3	1.7	2.1
University jobs during summer	.5	.3	.3	.5	.7
Other jobs during summer	1.6	1.0	1.4	1.6	1.9

<sup>a</sup>Students were instructed as follows: Indicate the number of university jobs and all other jobs, as well as jobs held during the time you attended classes and during the time (summer) you are not in school. If you hold the job year-round, count it for summer and count it while attending classes.

Table 7

Paid work experiences since fall quarter 1989  
for respondents to the Undergraduate Survey

Question Response	Total Group		Year in School								Chi-sq.
	N	%	Freshman		Sophomore		Junior		Senior		
			N	%	N	%	N	%	N	%	
Worked for pay at any time since classes started fall quarter of 1989	<u>2,548</u>		<u>392</u>		<u>527</u>		<u>648</u>		<u>981</u>		36.32 <sup>***</sup>
Yes	2,122	83.3	292	74.5	427	81.0	545	84.1	858	87.5	
No	426	16.7	100	25.5	100	19.0	103	15.9	123	12.5	
U of M work study	106	4.2	23	5.9	25	4.7	19	2.9	39	4.0	5.87
U of M campus	588	23.1	71	18.1	112	21.3	159	24.5	246	25.1	9.38 <sup>*</sup>
Within mile of campus	239	9.3	41	10.5	49	9.3	43	6.6	106	10.8	8.68 <sup>*</sup>
More than mile from campus	1,325	52.0	168	42.9	262	49.7	349	53.8	546	55.7	20.31 <sup>***</sup>
Primary job	<u>2,018</u>		<u>272</u>		<u>405</u>		<u>515</u>		<u>826</u>		135.81 <sup>***</sup>
Sales	387	19.2	71	26.1	106	26.2	100	19.4	110	13.3	
Service	561	27.8	91	33.5	128	31.6	137	26.6	205	24.8	
Skilled trades	115	5.7	8	2.9	20	4.9	34	6.6	53	6.4	
Unskilled	156	7.7	31	11.4	28	6.9	44	8.5	53	6.4	
Professional	351	17.4	16	5.9	37	9.1	76	14.8	222	26.9	
Clerical	448	22.2	55	20.2	86	21.2	124	24.1	183	22.2	
Other	63	3.0									

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

Table 8

Hours per week spent during spring quarter 1990  
in various school and work activities by  
respondents to the Undergraduate Survey

Activity	N <sup>a</sup>	$\bar{x}$ <sup>b</sup>	SD	Mdn <sup>b</sup>	Hours per week				
					0 %	1-10 %	11-20 %	21-30 %	31+ %
Studying	2,597	15.8	9.9	14.7	1.2	39.1	38.8	15.3	5.6
Attending classes	2,606	12.4	5.2	12.1	1.2	35.5	58.6	3.8	.9
Working at a paid job M - F	2,606	13.3	11.5	12.5	26.8	18.3	34.5	13.2	7.2
Working at a paid job on weekends	2,601	4.6	5.9	.5	52.1	32.9	14.2	.7	.1
Total weekly hours in paid job	2,601	17.9	13.5	18.3	22.0	11.1	30.5	22.5	15.9
Working at an unpaid position(e.g., internship, stud. teach., or other)	2,606	1.2	5.1	.1	87.5	9.8	1.2	.7	.8
Doing unpaid community serv. work	2,606	.5	1.6	.1	87.2	12.3	.4	.1	—
Participating in University clubs, groups, or athletics	2,605	2.3	4.9	.3	61.3	34.2	3.4	.7	.3
Taking care of home and/or family	2,593	7.4	15.1	2.9	35.2	49.0	8.1	2.5	5.2

<sup>a</sup>This number represents the total number of students who indicated a response for the particular activity.

<sup>b</sup>Included in the calculations are students who indicated zero hours in a given category.



the average student spends an average of 16 hours studying and 12 hours attending classes. Given involvement in these three activities, there is little available time to participate in other University activities. The average student spends about two hours participating in various University clubs, groups or athletic activities. These four types of activities account for an average of 48 hours a week.

As the results in Table 9 indicate, there were statistically significant differences among the four year-in-school groups in hours spent in each of the types of activities. The differences were greatest for time working at an unpaid position (as year in school increased, mean hours increased), and working at a paid job Monday to Friday (as year increased, mean hours increased). As year in school increased, students reported that they spent less time attending class but more time studying.

Table 10 contains a distribution of the total hours worked, hours worked Monday through Friday, and hours worked on the weekends for the total sample of students. This distribution is presented because subsequent analyses will explore the relationship between hours worked and academic progress and performance. There is a view that working up to a certain number of hours a week might have either no negative effects on progress and performance (or even positive effects), but beyond a certain number of hours the effects are negative. Of the respondents, 38.4 percent reported that they worked more than 20 hours a week, and 8.2 percent indicated that they worked 40 hours or more at paid jobs during spring quarter. As subsequent results indicate, there is a very clear relationship between hours worked and quarterly credits attempted and completed, but only a slight relationship between hours worked and grades.

Characteristics of current work. Table 11 describes the characteristics of students' current work experiences. Of the students who worked, the majority (60.8%) worked off campus; 23.0 percent worked on campus in a regular job and another 4.2 percent worked on work-study jobs. About one-fifth (21.4%) had more than one paid job during the 1989-90 school year.

Students were asked to describe the characteristics of the job they considered to be their primary job. The largest percentage of students had service jobs (27.0%) or clerical/office jobs (21.6%). When asked which category best described the nature of their primary job, 63 respondents checked the category "other." Of these, 22 mentioned multiple answers (13 noted two categories, and 9 noted three categories). Six were in the military or National Guard, and five had paid internships. The remaining 30 were quite varied (e.g. broadcast news, and animal handler). There were statistically significant year-in-school differences in nature of primary job: as year in school increased, students were more likely to indicate jobs in the professional/managerial category.

Table 9

Year-in-school differences in mean hours per week during spring quarter 1990 for various school and work activities for respondents to the Undergraduate Survey

Activity	Year in School												F-ratio
	Freshman			Sophomore			Junior			Senior			
	N	x	SD	N	x	SD	N	x	SD	N	x	SD	
Studying	390	14.9	9.0	525	15.3	9.5	646	16.5	10.7	976	16.0	9.8	2.77*
Attending classes	390	13.4	4.7	527	12.7	4.0	649	12.5	5.1	980	11.9	5.8	8.14***
Working at a paid job M-F	390	9.8	9.6	527	12.1	11.0	649	13.3	11.4	980	15.2	11.9	23.93***
Working at a job on weekends	390	4.1	5.6	525	5.1	6.2	648	4.7	6.1	978	4.4	5.8	2.63*
Total hours paid work	390	13.9	12.3	525	17.2	13.7	648	18.1	13.2	978	19.6	13.5	17.40***
Working at an unpaid pos. (e.g., internship, stu. teach., or other)	391	.4	1.9	527	.6	2.4	649	.7	2.4	979	2.3	7.7	24.21***
Doing unpaid community service wk.	391	.3	1.3	527	.3	1.1	648	.6	2.1	980	.5	1.7	3.83**
Participating in Univ. clubs, groups, or athletics	391	3.1	6.3	526	2.3	4.7	649	2.2	4.7	979	2.0	4.4	4.89**
Taking care home and/or family	390	5.3	15.6	524	5.3	12.5	648	7.8	15.9	972	9.1	14.9	10.38***

\*p < .05  
 \*\*p < .01  
 \*\*\*p < .001

Table 10

Frequency distribution for hours per week  
during spring quarter 1990 in paid work for  
respondents to the Undergraduate Survey

Hours	Total Hours <sup>a</sup>		Weekdays		Weekends	
	N	%	N	%	N	%
0	572	22.0	698	26.8	1354	51.9
1	2	.1	2	.1	12	.5
2	5	.2	9	.3	45	1.7
3	6	.2	15	.6	35	1.3
4	18	.7	31	1.2	96	3.7
5	28	1.1	56	2.1	124	4.8
6	25	1.0	43	1.6	92	3.5
7	14	.5	25	1.0	33	1.3
8	41	1.6	91	3.5	217	8.3
9	15	.6	31	1.2	33	1.3
10	84	3.2	173	6.6	170	6.5
11	10	.4	18	.7	10	.4
12	74	2.8	115	4.4	64	2.5
13	36	1.4	30	1.2	23	.9
14	34	1.3	40	1.5	37	1.4
15	157	6.0	220	8.4	67	2.6
16	84	3.2	82	3.1	108	4.2
17	37	1.4	25	1.0	2	.1
18	76	2.9	60	2.3	19	.7
19	28	1.1	9	.3	3	.1
20	256	9.8	303	11.6	33	1.3
21	45	1.7	13	.5	1	.0
22	39	1.5	22	.8	3	.1
23	43	1.7	18	.7	10	.4
24	85	3.3	43	1.6	2	.1
25	131	5.0	118	4.5	1	.0
26	41	1.6	16	.6	--	--
27	19	.7	7	.3	--	--
28	54	2.1	13	.5	--	--
29	8	.3	3	.1	--	--
30	121	4.7	92	3.5	3	.1
31	12	.5	--	--	--	--
32	52	2.0	26	1.0	3	.1
33	16	.6	5	.2	--	--
34	18	.7	6	.2	--	--
35	47	1.8	26	1.0	--	--
36	19	.7	1	--	1	.0
37	9	.3	6	.2	--	--
38	14	.5	2	.1	--	--
39	12	.5	--	--	--	--
40	101	3.9	86	3.3	--	--
More than 40	113	4.3	27	1.0	--	--

<sup>a</sup>"Total hours" was computed by adding weekday and weekend hours worked by each respondent. Thus, for example, 113 persons worked more than 40 hours a week, and 27 of those worked the full amount on weekdays. None worked that amount on the weekends, so the remaining persons who worked more than 40 hours a week worked both weekdays and weekends.

Table 11

Characteristics of paid work experiences  
during the 1989-90 school year for respondents to  
the Undergraduate Survey who worked for pay  
at any time since classes started fall quarter 1989

Question Response	N	%
<b>Work setting<sup>a</sup></b>		
U of M Work-Study Program	110	4.2
U of M but not a Work-Study Program	605	23.0
Not for the U of M but within a mile of campus	245	9.3
Not for the U of M and more than a mile from campus	1,355	51.5
<b>More than one paid job</b>	<u>2,142</u>	
Yes	459	21.4
No	1,683	78.6
<b>Number of different paid jobs</b>	<u>461</u>	
2	391	84.8
3	50	10.8
4	9	2.0
5 or more	4	.8
<b>Nature of primary job<sup>b</sup></b>	<u>2,129</u>	
Sales (e.g., salesperson, cashier, counter person)	393	18.5
Service (e.g., janitor, cook, waitress, hairdresser)	575	27.0
Skilled trades (e.g., electrician, auto mechanic)	119	5.6
Unskilled labor (e.g., machine operator, construction)	159	7.5
Professional/managerial (e.g., health care professional, business manager, teacher)	361	17.0
Clerical or office (e.g., typist, file clerk, bookkeeper, computer operator)	459	21.6
Other	63	3.0

--Table 11 continued--

(Table 11 continued)

Question Response	N	%
Hourly salary for primary job <sup>c</sup>	<u>2,098</u>	
< \$5.00	279	13.3
\$5.01 - \$7.50	1,305	62.2
\$7.51 - \$10.00	359	17.1
\$10.01 and above	155	7.4
Length of time in primary job	<u>2,137</u>	
0 - 5 months	528	24.7
6 months - 1 year	606	28.4
1 - 2 years	552	25.8
3 - 5 years	330	15.4
More than 5 years	121	5.7

<sup>a</sup>These are not mutually exclusive since students checked all types and locations of current paid employment.

<sup>b</sup>Students who had more than one job were instructed as follows: Please let your responses to the following questions reflect the paid job that involves more of your time than the others. Consider this your primary job.

<sup>c</sup>The mean hourly salary was \$6.91 ( $SD = 3.08$ ), the median salary was \$6.34, and the modal salary was \$6.00.

There was considerable variation in how long students had held their primary job: 24.7 percent had been in the job five months or less, whereas another 5.7 percent had been in the job for more than five years. Not surprisingly, as year in school increased, so also did job tenure. Men students had slightly longer job tenure than did women students.

Location of job was explored to determine if there were differences in hours spent working, hourly salary and job satisfaction as a function of location of the job. Other studies on the effects of employment have suggested that on-campus jobs can have positive effects on variables such as student retention and satisfaction. Results contained in Table 12 compare the following four groups: work-study jobs, regular campus jobs, off-campus jobs close to campus, and distant off-campus jobs. No statistical comparisons were possible since about one-fifth of the students held more than one job and it was not possible to determine which job they considered to be their primary job in describing hourly salary and job satisfaction. The mean levels of job satisfaction were similar for all four groups, although the mean hourly salary for students who worked near campus was considerably lower than students who worked either at the University or far from campus.

A more precise analysis of differences between students who were employed either on-campus or off-campus is contained in Table 13. Students who worked on campus spent significantly more time studying than did students who worked off campus. Students who worked off campus spent more hours working, due entirely to the larger number of hours they worked on weekends. Students who worked on campus had slightly higher University GPA's and were slightly more satisfied with their University experiences than students who worked off campus. There were no statistically significant differences in average hourly salary, overall job satisfaction, or total degree credits completed as a function of location of job.

Table 14 describes additional average salary differences among subgroups of students. There were statistically significant differences for gender, year in school, nature of primary job and length of time in primary job, but not for race or work location. Men students had higher hourly salaries than women students.<sup>a</sup> As year in school and job tenure increased, so too did average hourly salary. There were also differences in average hourly salary as a function of the nature of the job: jobs in the sales and service categories had the lowest hourly salaries.

Job satisfaction. As the results in Table 15 indicate, undergraduates are satisfied with the jobs they held since classes started fall quarter 1989. The mean job satisfaction was 4.4 on a six-point job satisfaction item. (On a similar question concerning satisfaction with University

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<sup>a</sup>A fuller analysis of gender differences on selected variables from the survey for those undergraduates twenty-four years of age or younger was done as an honors senior thesis (Kroenke, 1991).

Table 12

Descriptions of hours studying and working, hourly salary, and primary job satisfaction as a function of location of paid employment for respondents to the Undergraduate Survey

Variable	Location <sup>a</sup>											
	Univ. Wk. St.			Univ. Regular			Near Campus			Distant from Campus		
	N	x	SD	N	x	SD	N	x	SD	N	x	SD
<b>Hours per week</b>												
Studying	106	17.2	8.56	604	15.6	9.33	242	14.7	8.40	1351	14.7	9.41
Attending classes	108	12.9	4.23	605	12.3	4.98	245	11.9	4.69	1354	12.1	5.07
Working M-F	108	14.2	8.08	605	16.7	9.83	245	16.3	10.42	1354	16.0	11.31
Working weekends	108	2.8	5.00	605	3.4	5.00	244	6.0	6.03	1351	6.7	6.31
Total hours paid work	108	17.0	9.79	605	20.1	10.95	244	22.3	11.30	1351	22.7	12.47
Hourly salary	110	\$6.67	11.07	596	\$6.80	1.96	236	\$6.09	1.95	1318	\$7.08	3.57
Job satisfaction <sup>b</sup>	107	4.4	1.31	605	4.4	1.25	245	4.4	1.25	1346	4.3	1.28

<sup>a</sup>Because a substantial percentage of students (21.4%) had more than one job, the job location categories did not yield mutually independent groups for purposes of statistical analysis. Hence, no statistical comparisons were possible. The next table reports statistical comparisons for students who had either a job on-campus or a job off-campus.

<sup>b</sup>Job satisfaction rated on a six-point scale with 1=Very dissatisfied to 6=Very satisfied.

Table 13

Statistical comparisons between on-campus and off-campus jobs for weekly hours studying and working, hourly salary, job satisfaction and academic indicators for respondents to the Undergraduate Survey

Variable	Location <sup>a</sup>						t
	On Campus			Off Campus			
	N	x	SD	N	x	SD	
<b>Hours per week</b>							
Studying	471	16.3	9.4	1189	14.9	9.2	2.88**
Attending classes	472	12.3	4.8	1193	12.1	4.9	.79
Working M-F	472	15.2	9.4	1193	15.2	11.3	-.03
Working weekends	472	1.9	4.1	1190	5.9	6.2	-12.83***
Total hours paid work	472	17.2	10.1	1190	21.1	12.2	-6.27***
Hourly salary	472	\$6.86	2.1	1166	\$6.97	3.6	-.62
Job satisfaction	473	4.4	1.3	1186	4.3	1.3	.40
U of M GPA	470	2.9	.6	1180	2.8	.6	3.44***
Total degree credits	470	127.1	62.7	1183	123.8	60.1	.99
School work conflict	463	9.5	2.9	1162	9.8	3.1	-1.88
Satisfaction with <sup>b</sup> University	465	4.6	1.2	1173	4.4	1.2	2.34*

<sup>a</sup>This analysis included only those students who had either a job on campus or a job off campus. Students with two or more jobs were excluded.

<sup>b</sup>Satisfaction was coded on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001



Table 14

Differences among subgroups in hourly salary in primary job  
for respondents to the Undergraduate Survey who worked  
for pay at any time since classes started fall quarter 1989

Question Subgroup	N	x	SD	F-ratio	t-test
Total group	<u>2,098</u>	\$6.34	3.05		
Gender	<u>2,080</u>				-5.26***
Female	1,085	\$6.57	2.91		
Male	995	\$7.28	3.24		
Year in school	<u>2,050</u>			25.53***	
Freshman	284	\$5.79	1.45		
Sophomore	407	\$6.38	2.36		
Junior	531	\$7.03	3.71		
Senior	828	\$7.43	3.22		
Race	<u>2,041</u>			1.41	
American Indian	7	\$5.68	1.96		
Asian Pacific American	95	\$6.56	2.02		
Black/African American	33	\$6.34	1.26		
Hispanic	13	\$5.71	1.01		
Caucasian	1,893	\$6.95	3.20		
Work Setting <sup>a</sup>	<u>1,638</u>				- .62
On campus	472	\$6.86	2.10		
Off campus	1,166	\$6.97	3.60		
Nature of Primary job	<u>2,082</u>			49.61***	
Sales	383	\$5.68	1.82		
Service	567	\$6.12	2.10		
Skilled trades	119	\$7.79	2.55		
Unskilled labor	157	\$7.08	2.04		
Professional/managerial	343	\$8.87	4.69		
Clerical or office	456	\$6.99	1.49		
Other	57	\$8.55	8.20		
Length of time in primary job	<u>2,094</u>			52.70***	
0 - 5 months	519	\$6.25	1.75		
6 months - 1 year	599	\$6.51	2.47		
1 - 2 years	536	\$7.01	3.69		
3 - 5 years	323	\$7.30	3.20		
More than 5 years	117	\$10.44	4.53		

<sup>a</sup>Statistical comparison as a function of work setting was based on students who worked in only one setting.

\*p < .05

\*\*p < .01

\*\*\*p < .001

Table 15

Overall job satisfaction in primary job  
for respondents to the Undergraduate Survey who worked  
for pay at any time since classes started fall quarter of 1989

Response <sup>a</sup>	N	%	x	SD
	<u>2,138</u>		4.4	1.3
Very dissatisfied	96	4.5		
Moderately dissatisfied	96	4.5		
Dissatisfied	213	10.0		
Satisfied	712	33.3		
Moderately satisfied	600	28.1		
Very satisfied	421	19.7		

<sup>a</sup>Responses were coded on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

experiences, reported in Table 31, the mean was 4.5). When respondents were asked to rate their job satisfaction on each of several factors, they were given a chance to add in another factor, and 121 persons did so. The other factors mentioned most frequently included benefits (N=14), flexibility (N=9), training or advancement opportunity (N=9), supervisor or management (N=8), enjoyable work (N=8), the work environment or conditions (N=7), location (N=6), hours (N=5), and stress (N=4). Some of these were positive factors and some were negative--the respondent did not usually specify. Some of these "other" responses were already legitimate alternatives in the question (e.g., flexibility, quality of supervision or management) and it is not clear why the respondent chose to write in an answer rather than rate one of the existing alternatives.

Table 16 describes the overall job satisfaction levels for various subgroups of students. There were no significant differences in satisfaction as a function of year in school, but women students were slightly more satisfied than men students. Students in professional/managerial jobs were most satisfied, and students working at unskilled labor jobs were least satisfied. There were no statistically significant differences as a function of either race or work location.

There was a small, statistically significant negative correlation between job satisfaction and number of hours worked on the weekend ( $r = -.12$ ,  $p < .001$ ) and total hours worked ( $r = -.06$ ,  $p < .01$ ).

Table 17 contains a more detailed description of the levels of job satisfaction for each of 12 dimensions of job satisfaction typically included in the literature on job satisfaction. Students were most satisfied with the flexibility of their work hours and relationships with co-workers, and were least satisfied with how their jobs contributed to their overall career plans and the opportunities to use their skills and abilities.

Also contained in Table 17 are the correlations between each of the specific aspects of job satisfaction and overall job satisfaction. As expected, all of the correlations were statistically significant, since each of components had been identified in the literature as contributing to job satisfaction. Of interest is the finding that job satisfaction was much more highly correlated with intrinsic factors (e.g., nature of the job and opportunity to use skills and abilities) than with extrinsic factors (e.g., pay and flexibility of hours).

College differences. Since the focus of the present study was undergraduates on the Twin Cities campus, detailed analyses of students within each of the undergraduates colleges were not performed. However, one series of analyses did compare colleges on 13 of the more important employment variables included on the survey.

Table 16

Differences in overall job satisfaction in primary job  
for respondents to the Undergraduate Survey who worked  
for pay at any time since classes started fall quarter 1989<sup>a</sup>

Question Subgroup	N	x	SD	F-ratio	t-test
Total group	<u>2,138</u>	4.4	1.3		2.50**
Gender	<u>2,122</u>				
Female	1,106	4.4	1.3		
Male	1,016	4.3	1.3		
Year in school	<u>2,091</u>			1.84	
Freshman	290	4.2	1.4		
Sophomore	418	4.4	1.3		
Junior	538	4.4	1.2		
Senior	845	4.4	1.3		
Race	<u>2,079</u>			1.95	
American Indian	6	3.5	1.2		
Asian Pacific Amer.	95	4.3	1.2		
Black/Afric. Amer.	32	3.9	1.4		
Hispanic	15	4.1	1.3		
Caucasian	1,931	4.4	1.3		
Work setting <sup>b</sup>	<u>1,659</u>				.40
On campus	473	4.4	1.3		
Off campus	1,186	4.3	1.3		
Nature of primary job	<u>2,120</u>			11.69***	
Sales	392	4.2	1.2		
Service	573	4.2	1.2		
Skilled trades	119	4.6	1.3		
Unskilled labor	158	4.1	1.4		
Professional/manager.	359	4.8	1.4		
Clerical or office	456	4.4	1.2		
Other	63	4.7	1.4		
Length of time in primary job	<u>2,130</u>			2.18	
0 - 5 months	524	4.3	1.3		
6 months - 1 year	606	4.4	1.3		
1 - 2 years	551	4.4	1.2		
3 - 5 years	329	4.3	1.3		
More than 5 years	120	4.1	1.5		

<sup>a</sup>Responses to the satisfaction question were coded on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

<sup>b</sup>Statistical comparison as a function of work setting was based on students who worked in only one setting.

\* p < .05  
\*\* p < .01  
\*\*\* p < .001

Table 17

Factors of job satisfaction in primary job  
for respondents to the Undergraduate Survey who worked  
for pay at any time since classes started fall quarter of 1989 (N=2,139)

Factor	Correlation with overall Job Satis. <sup>b</sup>	Response <sup>a</sup>										x	SD
		Very Dissat.		Dissat.		Neutral		Satisfied		Very Satisfied			
		N	%	N	%	N	%	N	%	N	%		
Pay	.31***	55	2.6	249	11.7	434	20.3	988	46.3	410	19.2	3.7	1.0
Flexibility of work hours	.31***	30	1.4	118	5.6	248	11.7	821	38.6	909	42.8	4.2	.9
Opportunity to make your own decisions	.44***	56	2.6	172	8.1	635	30.0	784	37.0	470	22.2	3.7	1.0
Opportunity to learn new things	.47***	152	7.1	313	14.7	667	31.3	564	26.5	432	20.3	3.4	1.2
Contribution to your overall career plans	.42***	393	18.4	460	21.6	592	27.7	399	18.7	290	13.6	2.9	1.3
Opportunity to use your skills & abilities	.47***	247	11.6	366	17.1	599	28.1	618	28.9	305	14.3	3.2	1.2
Opportunity to have a lot of responsibility	.42***	130	6.1	272	12.7	581	27.2	708	33.1	446	20.9	3.5	1.1
Being helpful to others or useful to society	.36***	80	3.7	202	9.5	591	27.7	832	38.9	432	20.2	3.6	1.0
Recognition for the work you do	.49***	155	7.2	303	14.2	706	33.0	711	33.2	264	12.3	3.3	1.1
Nature of job duties	.50***	126	5.9	251	11.8	718	33.6	819	38.3	222	10.4	3.4	1.0
Relationship with co-workers	.31***	14	.7	61	2.9	282	13.2	920	43.2	855	40.1	4.2	.8
Quality of supervision or mgmt.	.41***	126	5.9	214	10.0	435	20.4	806	37.8	554	25.9	3.7	1.1

<sup>a</sup>Responses were coded on a five-point scale from 1=Very dissatisfied to 5=Very satisfied.

<sup>b</sup>Pearson product-moment correlations between specific job satisfaction items and overall job satisfaction.

\*\*\* p < .001

Comparisons among colleges, summarized in Table 18, indicated statistically significant differences for 12 of the 13 variables (the exception was average weekly spendable income). The percentage of students who had worked since fall quarter 1989 ranged from lows of 71.6 percent for Education, 74.7 percent for the Institute of Technology, and 77.4 percent for Health Sciences to highs of 92.9 percent for the College of Biological Sciences, 91.5 percent for Agriculture, and 89.7 percent for Architecture and Landscape Architecture. In terms of total average weekly hours worked, means ranged from a low of 12.9 hours for Technology to a high of 20.6 hours for Natural Resources.

Average hourly salaries ranged from a low of \$6.05 for students in General College to a high of \$8.30 for Management; hourly salaries were previously found to be higher as year in school increased and most students in General College are freshmen and sophomores. Job satisfaction varied only slightly across colleges. Students in colleges with a higher average hours worked also reported higher levels of conflict between school and work. Finally, in terms of students' familiarity with financial matters, students in Management reported the highest means and students in General College the lowest means.

Transfer status. The sample of respondents was composed both of students who started at the University and those who transferred from other colleges and universities. Table 19 compares transfer and non-transfer students in their responses to selected items on the survey. Although there were statistically significant differences for five of the items, the magnitude of the differences was small. Transfer students reported slightly higher hourly salaries, (probably as a function of year in school), more knowledge of personal finance, and greater conflict between school and work than students who started at the University. Not surprisingly, students who started at the University reported having had a larger number of jobs, both during the summer and during the school year since they had started at the University.

### Effects of Working and Motivations for Working

The next set of questions focused on understanding the effects of working, conflicts students experience between school and work, and why students work while attending classes.

Positive and negative effects. Two separate sets of questions asked students to identify what they thought were the positive and negative effects of working at a paid job during their years at the University of Minnesota. For these analyses, all students who had worked at any time during their years at the University were included in the analysis.

Table 20 contains a description of perceived benefits of working at a paid job. Although one-tenth of the students (9.2%) reported that there were no positive benefits, the ten possible benefits solicited endorsements from a low of 13.1 percent for "increased my ability to write effectively and clearly" to a high of 68.2 percent for "increased my ability to work well with

Table 18

Comparisons among undergraduate colleges in students'  
paid work experiences while attending University of Minnesota<sup>a</sup>

College	Worked Since Fall 1989		Weekly hours		Weekly Hours		Weekly Total Hours		Total Jobs Sch. Yr.		Total Jobs Summer		Total Jobs Held		Quarters Worked Pmt. Tm.		Hourly Salary		Overall Job Satis.		Weekly Spending		Knowledge of Finance		Work/School Conflict	
	N	%	N	x	N	x	N	x	N	x	N	x	N	x	N	x	N	x	N	x	N	x	N	x	N	x
	Agricult.	71	91.5	71	15.7	71	4.7	71	20.4	68	2.4	68	1.8	68	4.2	70	5.2	65	\$7.52	65	4.5	65	\$31.55	69	3.4	67
Arch.	39	89.7	38	10.8	38	4.4	38	15.2	36	2.8	35	2.3	35	5.1	38	6.3	35	\$6.93	34	4.2	34	\$29.79	38	2.9	35	9.5
CBS	42	92.9	42	12.3	42	5.6	42	17.9	40	2.6	40	2.5	40	5.0	42	6.9	36	\$7.05	37	4.8	40	\$33.00	42	2.8	40	9.2
Educ.	81	71.6	81	10.2	81	3.3	81	13.5	64	2.8	64	2.3	63	5.1	78	5.6	56	\$7.17	57	4.7	75	\$33.04	80	2.8	65	10.0
Gen. Coll.	121	77.7	120	12.3	120	5.8	120	18.1	102	2.0	102	1.7	102	3.7	119	2.5	88	\$6.05	91	4.1	117	\$35.38	120	2.5	103	9.9
Hu. Ecol.	101	87.1	101	14.6	101	5.2	101	19.8	93	2.6	93	2.4	93	5.0	99	5.9	86	\$6.42	87	4.5	95	\$33.33	98	2.7	92	9.5
CLA	1429	86.4	1429	14.6	1426	4.9	1426	19.5	1299	2.7	1293	2.1	1283	4.9	1404	5.1	1188	\$6.60	1215	4.3	1333	\$36.58	1408	2.7	1283	10.1
Mgmt.	94	84.0	94	15.0	94	2.8	94	17.8	83	2.6	83	2.2	83	4.7	94	5.8	76	\$8.30	78	4.5	83	\$49.04	92	3.6	83	9.4
Nat. Res.	37	86.5	37	14.9	37	5.6	37	20.6	36	2.6	36	1.9	36	4.5	37	5.8	29	\$6.92	31	4.1	34	\$28.18	36	2.6	35	9.5
IT	443	74.7	443	9.8	442	3.1	442	12.9	392	2.1	391	2.0	390	4.1	438	4.9	326	\$7.64	329	4.3	426	\$34.18	441	3.0	381	9.0
Heal. Sci.	93	77.4	108	10.5	107	5.8	107	16.1	96	2.3	96	2.1	96	4.4	92	5.7	80	\$7.96	82	4.5	103	\$31.50	108	2.8	95	9.7
Other	30	80.0	15	17.2	15	3.3	15	20.5	13	2.9	13	2.2	13	5.1	13	6.2	11	\$7.83	11	4.4	14	\$36.79	14	2.6	13	11.2

<sup>a</sup>The results of the statistical comparisons were as follows:

Worked since fall 1989 (chi square=55.16<sup>\*\*\*</sup>); weekly hours Monday to Friday (F=7.79<sup>\*\*\*</sup>); weekly hours weekends (F=5.59<sup>\*\*\*</sup>); weekly total hours (F=9.48<sup>\*\*\*</sup>); total jobs school year (F=3.67<sup>\*\*\*</sup>); total jobs summer (F=1.96<sup>\*\*\*</sup>); total jobs held (F=2.99<sup>\*\*</sup>); quarters worked part time (F=5.44<sup>\*\*\*</sup>); hourly salary (F=6.32<sup>\*\*\*</sup>); overall job satisfaction (F=9.61<sup>\*\*\*</sup>); weekly spending (F=1.33); knowledge of finance (F=9.61<sup>\*\*\*</sup>); work/school conflict (F=3.03<sup>\*\*</sup>).

\* p<.05  
\*\* p<.01  
\*\*\* p<.001

Table 19

Differences between transfer and non-transfer students  
in response to selected items on the Undergraduate Survey

Question	Status						t
	Transfer			Non-Transfer			
	N	x	SD	N	x	SD	
Hours worked M-F	1069	13.6	12.2	1537	13.1	10.9	- 1.31
Hours worked weekends	1067	4.6	6.1	1534	4.5	5.8	- .53
Total weekly hours worked	1067	18.3	13.9	1534	17.6	13.1	- 1.41
Hourly salary	861	\$7.34	3.8	1237	\$6.61	2.4	- 5.40***
Overall job satisfaction	880	4.4	1.2	1258	4.3	1.3	- .44
Weekly spendable income	996	\$37.43	43.0	1443	\$34.58	38.03	- 1.12
Knowledge of finance	1051	2.9	1.2	1513	2.8	1.1	- 2.13*
Total summer jobs	949	2.5	1.9	1395	2.6	2.0	1.53
Total school year jobs	943	2.0	2.8	1393	2.2	1.5	2.80**
Total jobs	943	4.5	3.0	1391	4.8	3.1	- 2.36**
Work/school conflict	941	10.1	3.1	1373	9.7	3.1	- 3.05**

\*p &lt; .05

\*\*p &lt; .01

\*\*\*p &lt; .001



Table 20

Undergraduate Survey respondents' perceptions of  
how life as a student has been positively  
affected by working at a paid job  
during their years at the University

Effect	N	%
No positive effects	212	9.2
Brought work related examples into class discussions	622	26.9
Gained a better understanding of how to apply my knowledge	882	38.2
Encouraged me to take courses I otherwise might not have taken	329	14.2
Increased my ability to think critically	738	31.9
Increased my ability to raise questions and examine contrary views	677	29.3
Increased my ability to write effectively and clearly	302	13.1
Helped me to speak effectively and clearly	780	33.8
Helped me to manage my time more effectively	1,279	55.3
Increased my ability to work with other people	1,576	68.2
Made me take more personal responsibility for my work	1,153	49.9
Other	217	9.4

<sup>a</sup>These statistics are based on those students (N= 2,311) who had worked at some point while attending the University.

other people." These findings suggest that students view their work experiences as having important benefits above and beyond the salaries they receive to help them with college expenses. When asked to indicate how life as a student has been positively affected by working, respondents were given space to write in other answers. For those 222 students who wrote in answers to this question, the most frequent responses were: made money/ enabled me to pay my bills (N=25), social/made friends (N=21), increased appreciation of the value of education (N=21), had varied experiences I couldn't get elsewhere (N=21), self confidence (N=16), insights about the "real world" (N=13), career boost (N=13), better self-organization (N=10), and sense of independence (N=6).

There were some differences among subgroups of students in their responses to perceived benefits of working. Although women students were more likely than men students to indicate there were no positive benefits (12.7% versus 5.9%, respectively), they were also more likely to endorse three of the ten benefits: helped me to speak effectively and clearly, helped me to manage my time more effectively, and increased my ability to work well with other people.

The four year-in-school groups differed in the percentage who checked each of the various possible benefits. As year increased, students were less likely to indicate there were no positive benefits: freshmen (15.5%), sophomores (12.3%), juniors (7.7%), and seniors (6.7%). For all of the other 10 items except the time management and personal responsibility benefits, there were statistically significant differences; for all of the benefits, as year increased so did the likelihood of indicating benefit.

Table 21 contains similar information concerning perceived negative effects of working at a paid job. Of the total sample, 11.2 percent indicated that there were no negative effects. The response percentages for the 13 possible negative effects ranged from a low of 4.3 percent for "missed a test" to a high of 61.2 percent for "tiredness because of my work schedule." The high endorsement rate for this item is not surprising given the total number of hours students spend on work activities. Almost half (44.4%) indicated that they had "taken fewer credits to have more time for work." Subsequent analyses clearly indicate that as hours of paid work increase, the mean number of quarterly credits attempted and completed declines. For the 194 who also wrote in answers to this question, the most frequent responses were too little time for other things (family, friends, activities) (N=52), stress (N=23), tiredness (N=10), short-changed school work (N=9), withdrawn from classes (N=9), health deteriorated (N=7), no personal time (N=7), received lower grades (N=4), prolonged time to graduation (N=4), no chance to see advisors or tutors (N=3).

There were gender differences for several of the items concerning perceived negative effects. (On average, men students spent slightly fewer hours in a paid job than did women students.) Men students were more likely than women students to say there were no negative effects (13.1% versus 9.4%, respectively). Women students were more likely to endorse the

Table 21

Undergraduate Survey respondents' perceptions of how life as a student has been negatively affected by working at a paid job during their years at the University<sup>a</sup>

Effect	N	%
No negative effects	258	11.2
Taken an incomplete in a course	346	15.0
Taken fewer credits to have more time for work	1,025	44.4
Have not taken a course I wanted to take	510	22.1
Have not participated in supplemental educational activities (e.g., seminars)	914	39.5
Delayed fulfillment of program requirements	588	25.4
Not done as well as I wanted to because of not having enough study time	1,342	58.1
Insufficient time to study for examination	1,221	52.8
Could take courses only at certain times because of work schedule	806	34.9
Had to leave class early/arrive late because of work schedule	499	21.6
Taken easier courses to keep up my grades	253	10.9
Received lower grades in my courses	1,006	43.5
Missed a test	100	4.3
Tiredness because of my work schedule	1,415	61.2
Other	192	8.3

<sup>a</sup>These statistics are based on those students (N=2,311) who had worked at some point while attending the University.

following five items: did not take a course, did not participate in supplemental activities, insufficient time to study, could take courses only at certain times, and tiredness because of work schedule. Men students were more likely to endorse two items: took an incomplete and delayed fulfillment of requirements.

As year increased, students were less likely to say there were no negative effects: freshmen (16.2%), sophomores (12.9%), juniors (13.4%), and seniors (8.0%). For all of the possible negative effects except "missed a test" and "tiredness because of work schedule," as year increased students were more likely to indicate each of the possible negative effects.

Conflict between school and work. In addition to the self-reported positive and negative aspects of working, students responded to a series of three questions concerning the level of conflict they experienced between school and work. The three items had been used previously (Chartrand, 1989) in studies of college students in multiple role situations, and were used in the present study to define a three-item conflict scale.

Table 22 describes students' responses to each of the three items. Students reported moderate incompatibility (between "incompatible" and "neutral") between school and work roles, that they experienced conflicts more than occasionally (between "regularly" and "occasionally"), and that the intensity of the conflicts was mild. The mean for the three-item scale was 9.8, which suggests that students experience a moderate amount of conflict between their school and work responsibilities. Subsequent analyses describe the relationship between school and work conflict and indicators of academic success and progress.

Reasons for working. An important aspect in understanding students' work experiences requires an understanding of their motivations for working. Some educators posit that students work "to support a lifestyle to which they have become accustomed," whereas others believe that University students work out of necessity. Findings from this study suggest elements of both perspectives in students' descriptions of their motivations for working.

Students responded to a series of 11 statements that described various motivations for working while attending the University of Minnesota. Only students who had worked at any time while attending the University responded to the items.

Students work for a variety of reasons. As the results in Table 23 suggest, the need to cover current living expenses and to pay for college expenses are viewed by students as the two primary motivations for working; both had mean responses at the very important level. The other two items that had means at or above the level of important were to learn new skills and have extra money in case of need. Other motivations such as to help with career decisions, to learn new skills, and to feel competent, had considerably lower means. When asked to rate the importance of each of several reasons to work, respondents were also given

Table 22

Perceived conflict between work and school  
for respondents to the Undergraduate Survey  
who have worked at a paid job while attending the University

Question <sup>a</sup> Response	N	%	x	SD
Compatibility of work and school	<u>2,335</u>		3.5	1.3
Extremely compatible	83	3.6		
Very compatible	379	16.2		
Compatible	901	38.6		
Neutral	559	23.9		
Incompatible	230	9.9		
Very incompatible	119	5.1		
Extremely incompatible	64	2.7		
Frequency of role conflicts	<u>2,327</u>		3.4	1.3
Never	257	11.0		
Rarely	389	16.7		
Seldom	444	19.1		
Occasionally	890	38.2		
Regularly	232	10.0		
Frequently	91	3.9		
Constantly	24	1.0		
Intensity of conflicts	<u>2,324</u>		3.0	1.4
Insignificant	417	17.9		
Very mild	424	18.2		
Mild	602	25.9		
Moderate	584	25.1		
Strong	208	9.0		
Very strong	66	2.8		
Intense	23	1.0		

<sup>a</sup>Each response was coded on a seven-point scale as listed. These three items were used to create a work-and-school conflict scale with values ranging from 3 (little conflict) to 21 (high conflict).

Table 23

Importance ratings for reasons for working  
while attending school for respondents to the Undergraduate Survey  
who had worked anytime while attending the University (N=2,341)

Reason	Response <sup>a</sup>										x	SD
	Not at all Important		Slightly Important		Important		Very Important		Extremely Important			
	N	%	N	%	N	%	N	%	N	%		
To pay for college expenses	234	10.0	303	13.0	411	17.6	435	18.6	956	40.9	3.7	1.4
To cover current living expenses	142	6.1	211	9.0	329	14.1	482	20.6	1,177	50.3	4.0	1.3
To feel competent	415	17.8	473	20.3	787	33.8	441	18.9	214	9.2	2.8	1.2
To have money to enhance my reputation	1,295	56.2	542	23.5	309	13.4	111	4.8	46	2.0	1.7	1.0
To have extra money in case I need it	156	6.7	362	15.6	734	31.6	668	28.8	400	17.2	3.3	1.1
To be able to buy things for and entertain others	510	22.0	744	32.1	616	26.5	304	13.1	147	6.3	2.5	1.2
To learn new skills	103	4.4	373	16.0	754	32.3	693	29.7	412	17.6	3.4	1.1
To help me with career decisions	409	17.5	524	22.5	705	30.2	464	19.9	230	9.9	2.8	1.2
To be involved in something important	557	23.9	507	21.7	556	23.8	438	18.8	274	11.7	2.7	1.3
To help structure my time better	613	26.3	600	25.7	615	26.4	361	15.5	144	6.2	2.5	1.2
Other	820	35.1	552	23.7	551	23.6	294	12.6	117	5.0	2.3	1.2

<sup>a</sup>Responses coded on a five-point scale from Not at all important=1 to Extremely important=5.

an opportunity to write in other reasons. Of the 207 reasons written in, those most frequently noted were: to develop a career or have references (N=24), work experience (N=19), something to do (N=12), family to support (N=11), social aspect (N=11), self-support (N=10), survival (N=9), to pay bills (N=9), car (N=8), day care, and child support (N=5), and enjoy working (N=4). These are some of the same types of items that students reported as benefits of working, even though they did not endorse them as reasons for being employed while attending classes.

Correlations between reasons for working and total hours of paid employment and number of jobs held, reported in Table 24, suggest that stated reasons for working had low correlations with actual hours of paid employment. The correlations were highest for the items concerning living expenses and college expenses, but even these correlations accounted for only 5 percent of the variation in reported weekly hours in paid employment.

### Personal Finances

Another section of the questionnaire dealt with personal finance issues and how personal finances influenced students' work experiences. Results from the University's participation in the CIRP Freshman Survey, summarized in the introduction, suggested that our undergraduates are perhaps more likely to be financially independent than is true for students at other similar institutions.

Sources of funds to cover educational expenses. A question from the CIRP Freshman Survey was adapted for use in the present study to determine sources of funds students said they used to cover educational expenses. Table 25 indicates the percentage of students in each of the dollar amount categories for each of ten possible sources of support. For the students who responded to the survey, 41.9 percent reported that they received no financial support from parents, relatives or friends. This finding supports the hypothesis that our undergraduates are more likely to be financially independent than is true for undergraduates at other similar institutions. Savings from summer work and a part-time job off campus during the school year were the most frequently noted sources of financial support, and point to the important role students assign to paid employment as a source to cover their educational expenses. Of those 107 students who listed "other" sources of support, the most frequently listed sources were: scholarship (N=17), regents' scholarship (N=17), military (VA, GI, ROTC)(N=13), loans (N=8), AFDC (N=5), work tuition reimbursement (N=5), inheritance (N=3), athletic scholarship (N=2), loan from parents (N=2), tax returns (N=2), and trust funds (N=2).

Students who reported that they had worked since fall quarter 1989 differed from those who did not in their responses to the sources of funding items. Those findings, together with correlations between sources of funding and actual work experiences reported in Table 26, point to a relationship between finances and involvement in work experiences, although the highest correlation is only moderate.

Table 24

Correlations between total hours in paid employment,  
total number of different jobs held and reasons  
for working while attending school for respondents  
to the Undergraduate Survey

Reason	Total hours <u>paid employ.</u>	Total # <u>of jobs</u>	Tot. # of sch. <u>year jobs</u>	Tot. # of <u>summer jobs</u>
	r	r	r	r
To pay for college expenses	.19 <sup>***</sup>	.12 <sup>***</sup>	.10 <sup>***</sup>	.13 <sup>***</sup>
To cover current living expenses	.27 <sup>***</sup>	.17 <sup>***</sup>	.16 <sup>***</sup>	.14 <sup>***</sup>
To feel competent	.08 <sup>***</sup>	.03	.03	.02
To have money to enhance my reputation	.05 <sup>**</sup>	.00	-.00	.02
To have extra money in case I need it	.02	-.02	-.02	-.02
To be able to buy things for and entertain others	-.03	-.03	-.03	-.01
To be able to buy things and do things for myself	.03	.02	.02	.02
To learn new skills	.02	.08 <sup>***</sup>	.07 <sup>***</sup>	.06 <sup>***</sup>
To help me with career decisions	.01	.11 <sup>***</sup>	.11 <sup>***</sup>	.09 <sup>***</sup>
To be involved in something important	.04 <sup>*</sup>	.06 <sup>**</sup>	.06 <sup>**</sup>	.03
To help structure my time better	.02	-.01	-.01	-.02

\* p < .05  
 \*\* p < .001  
 \*\*\* p < .001



Table 25

Sources of funds to cover current year's educational expenses (room, board, tuition, and fees) for respondents to Undergraduate Survey (N=2,576)

Source	Amount						
	None %	\$1 to \$999 %	\$1000 to \$1999 %	\$2000 to \$2999 %	\$3000 to \$3999 %	\$4000 to \$4999 %	\$5000 or Over %
Parents, relatives or friends	41.9	16.7	9.2	8.0	5.9	5.0	13.0
Spouse/significant other	90.1	4.9	1.3	.9	1.0	.2	1.6
Savings from summer work	38.1	29.4	17.6	9.3	4.0	.9	.7
Other savings	68.6	20.0	5.6	2.7	1.4	.7	1.1
Part-time job on campus	73.6	11.8	6.0	3.5	2.5	1.2	1.5
Part-time job off campus	50.3	22.2	11.3	6.4	4.1	2.1	3.6
Full-time job while in college	89.7	2.4	1.6	1.6	.9	.8	3.0
Aid which does not need to be repaid	61.1	12.5	11.1	9.0	2.9	1.2	2.2
Aid which must be repaid	60.6	4.4	8.0	12.1	6.2	5.4	3.4
Other	95.8	1.3	.7	.6	.4	.3	.9

Table 26

Correlations between sources of income to cover educational expenses and work expenses for respondents to the Undergraduate Survey

Source <sup>a</sup>	Work status Since Fall 1989 <sup>b</sup>		t	Hours Paid Work	Hours Paid work	Total Hours	Total Number	Total Number School	Total Summer
	Yes	No		M-F	Weekend	Paid Work	Jobs	Year jobs	Jobs
				r	r	r	r	r	r
Parents, relatives or friends	2.7	3.5	-6.65***	-.25***	-.10***	-.26***	-.08***	-.08***	-.05**
Spouse/significant other	1.2	1.4	-4.37***	-.05***	-.06***	-.07***	-.02	-.01	-.02
Savings from summer work	2.2	2.2	.35	-.09***	.01	-.07***	-.04*	-.07***	.01
Other savings	1.5	1.7	-2.45*	-.08***	.00	-.07***	-.03	-.04*	-.01
Part-time job on campus	1.7	1.0	9.67***	.18***	-.06***	.13***	.14***	.15***	.09***
Part-time job off campus	2.3	1.1	15.62***	.17***	.31***	.28***	.15***	.14***	.12***
Full-time job while in college	1.4	1.0	6.59***	.43***	.09***	.41***	.09***	.10***	.07***
Aid which does not need to be repaid	1.9	2.1	-3.12**	-.11***	-.06***	-.12***	-.03	-.03	-.02
Aid which must be repaid	2.3	2.0	3.43***	-.03	.01	.06**	.11***	.11***	.08***

<sup>a</sup>Students included sources of income to cover 1989-90 educational expenses.

<sup>b</sup>Amounts for each source coded as follows: 1=None, 2=\$1 to \$999, 3=\$1,000 to \$1,999, 4=\$2,000 to \$2,999 and 7=\$5,000 or over. The means in this column are for the seven-point scale.

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

Allocation of financial resources. Another set of items asked students to describe how they allocated their financial resources across 13 categories (e.g., tuition, clothing, and savings). As the results in Table 27 indicate, the highest mean percent was for tuition (31.7% of students' financial resources). Next highest was room and board at 23.2 percent of total financial resources, transportation (7.6%), and other school expenses (7.1%). For this question there were 268 respondents who listed "other" uses. The most frequently noted were: bills (e.g., phone, Visa, heat) (N=34), "miscellaneous" (N=29), car payment (N=29), medical and dental (N=18), church or charity (N=14), gifts (N=14), loan payments (N=12), daycare (N=11), sorority or fraternity (N=9), food or eating out (N=8), donations or taxes (N=6). The absence of comparative figures for students at other institutions makes these data difficult to interpret.

Salary, parental views and financial knowledge. Table 28 contains students' responses to five other personal finance questions: annual income, educational loans, parental views, parental economic status, and knowledge of personal finance.

About half of the respondents said that they owed more than \$500 for educational loans. Students indicated that they bore the majority of the costs for their college expenses, even though they reported that their parents had a relatively high economic status. Data from the American Council on Education's Annual Cooperative Institutional Research Program (University of Minnesota data reported by Hendel, 1990) showed that parents of University of Minnesota first-time full-time students had a modal income level of \$40,000 - \$49,000. The remaining incomes were almost equally divided above and below that level: 41.3 percent below \$40,000 and 44.5 percent above \$49,000.

Finally, students reported that they did not have an especially good grasp of personal financial planning: only 57.3 percent reported knowledge of personal financial planning issues that was good, very good or excellent.

Students were concerned about their ability to finance their college education. Previously reported results indicated that financing college expenses is the primary reason why students say they work. As the results in Table 29 indicate, the majority of students (53.3%) do not think they would be able to attend the University if they were not working. About one-fourth of the sample had major concerns about having enough funds to complete college. The same question, whether college financing was of no concern, some concern, or major concern was also asked of incoming first-time full-time freshmen (Hendel, 1990). It was a major concern to 12.9 percent of those students, and of some concern to another 55.7 percent.

A final financial question asked students to indicate their weekly spendable income after they paid for school-related expenses, transportation, and room and board. As the results in Table 30 indicate, about one-fourth (23.6%) of the students said that had \$10 or less to spend each

Table 27

Percentage of financial resources of respondents  
to Undergraduate Survey allocated for particular purposes

Purpose	N	x	Mdn	SD	Percent Allocation						
					0 %	1-10 %	11 -20 %	21 -30 %	31 -40 %	41 -50 %	50+ %
Tuition	2,410	31.7	30.2	20.5	12.0	6.2	12.5	23.6	29.8	12.7	3.2
Other school expenses (e.g., books and supplies)	2,409	7.1	5.2	6.1	7.8	81.0	8.8	1.6	.3	.2	—
Room and board (e.g., rent, dormitory fees, groceries)	2,408	23.2	24.7	18.5	22.7	12.5	13.0	8.7	18.8	10.7	13.6
House payments	2,410	1.9	.1	8.0	92.2	1.8	1.6	1.9	1.9	1.3	.3
Family support	2,408	1.4	.1	5.6	90.1	5.8	1.9	1.0	.3	—	.1
Transportation (e.g., bus fees, bicycle/auto repairs)	2,407	7.6	5.2	7.9	14.7	67.8	12.9	8.3	.6	.6	—
Clothing	2,407	5.6	4.7	6.4	15.4	76.3	6.1	1.2	.5	.4	—
Other purchases (e.g., records, tapes, sports equipment)	2,406	3.8	2.3	4.9	27.6	67.1	4.3	.7	—	—	—
Entertainment (e.g., movies, sports events, etc.)	2,407	6.1	4.7	6.8	12.3	76.5	8.1	2.1	.5	.3	.3
Insurance	2,408	3.6	.4	5.6	53.5	39.2	6.1	1.0	.1	.1	—
Savings	2,410	3.3	.3	7.5	65.0	27.5	5.0	1.3	.3	.5	.8
Money given to others	2,409	.9	.1	2.7	77.7	21.2	.9	.1	.1	—	—
Vacation trips	2,409	2.6	.4	5.1	58.7	37.7	2.7	.5	.1	—	.2

Table 28

Personal finance experiences and knowledge  
for respondents to the Undergraduate Survey

Question Response	N	%
Personal annual income for 1989 <sup>a</sup>	<u>2,537</u>	
None	96	3.8
\$1,000 or less	122	4.8
\$1,001 - \$2,000	198	7.8
\$2,001 - \$3,000	235	9.3
\$3,001 - \$4,000	266	10.5
\$4,001 - \$5,000	317	12.5
\$5,001 - \$8,000	608	24.0
\$8,001 - \$10,000	271	10.7
\$10,001 - \$15,000	261	10.3
\$15,001 - \$20,000	77	3.0
over \$20,000	86	3.4
Money owed for educational loans	<u>2,556</u>	
None	1,295	50.7
\$500 or less	34	1.3
\$501 - \$1,000	58	2.3
\$1,001 - \$2,000	135	5.3
\$2,001 - \$4,000	391	15.3
\$4,001 - \$6,000	238	9.3
\$6,001 - \$8,000	145	5.7
\$8,001 - \$10,000	113	4.4
Over \$10,000	147	5.8
Perceptions of parents' views of payment for college expenses	<u>2,532</u>	
Doesn't apply to me	439	17.1
They believe that they have all or almost all of the financial responsibility for my college costs	476	18.6
They believe that costs should be shared with me but that they should pay the larger share	398	15.6
They believe that the costs should be shared equally between us	155	6.1
They believe that the costs should be shared with me but that I should pay the larger share	395	15.5
They believe that I should pay for my own college education	693	27.1

--Table 28 continued--

(Table 28 continued)

Question Response	N	%
Parents' current economic status	<u>2,552</u>	
Doesn't apply to me	284	11.1
Have difficulty in getting the necessities	52	2.0
Sometime have difficulty making ends meet	221	8.7
Have all the necessities but not many luxuries	426	16.7
Comfortable but not well-to-do	985	38.6
Have living standard well above the average	530	20.8
Wealthy	54	2.1
Students' perceptions of knowledge of personal financial planning	<u>2,564</u>	
Poor	350	13.7
Fair	746	29.1
Good	744	29.0
Very Good	512	20.0
Excellent	212	8.3

<sup>a</sup>Students were instructed as follows: Please estimate your personal annual income before taxes for 1989. (Include paid work, fellowships, scholarships, and other money paid to you. Exclude loans and money given to you by your family.)

Table 29

Concerns about ability to finance college  
education and role of working for pay of respondents  
to the Undergraduate Survey

Question Response	N	%
Concern	<u>2,583</u>	
None (I am confident that I will have sufficient funds)	671	26.0
Some concern (but I will probably have enough funds)	1,273	49.3
Major concerns (not sure I will have enough funds to complete college)	639	24.7
Able to attend if not working	<u>2,538</u>	
Yes	962	37.9
No	1,354	53.3
Don't work for pay	222	8.7

week and another 14.7 percent had over \$50 a week. The mean was \$35.70 and the median was \$23.06, suggesting that respondents have relatively few discretionary dollars available to them after paying for educational expenses. Men students said they had more spending money than women ( \$39.28 versus \$32.07;  $t=4.48$ ,  $p<.001$ ). As year in school increased, so also did weekly spending money ( \$27.08, \$34.86, \$36.91, and \$38.46, respectively;  $F=7.59$ ,  $p<.001$ ).

### Satisfaction with University

One item on the survey asked students to indicate how satisfied they were with their experiences at the University. The question was included in order to compare this sample with other student samples, and to examine the relationship between work experiences and satisfaction with their University experiences.

As the results in Table 31 suggest, the mean level of satisfaction was between slightly satisfied and moderately satisfied on a six-point scale, and is virtually identical to students' reported job satisfaction. The mean University satisfaction level of the sample is comparable to the mean of 4.6 reported by Matross, DesJardins, and Murdoch (1989) in their report describing responses of spring quarter 1989 bachelor's degree candidates.

Table 32 summarizes differences among subgroups of students in their response to the overall University satisfaction question. As year in school increased, mean satisfaction scores decreased slightly. Women students were slightly more satisfied than men students. Mean satisfaction levels also varied slightly as a function of college of enrollment, as was reported in Table 18.

### ACADEMIC PERFORMANCE AND PROGRESS

The next series of analyses investigated the relationship between responses to selected items concerning students' work experiences and indicators of academic success and performance. The intent in designing the study was to present a "snapshot" of how work affects academic success and progress, rather than to examine the question within a longitudinal framework from admission to graduation from the University.

#### Descriptive Results

Table 33 contains the descriptive statistics for the academic progress and performance variables provided by Data and Reporting Services. As the N column indicates, admissions test data (ACT  $N=868/2600=33.4\%$ , HSR  $N=1371/2600=52.7\%$ ) were available only for a subset of the respondents since about one-third of the respondents had transferred into the University.



Table 30

Students' spendable income in an average week  
 after paying for school related expenses, transportation,  
 and room and board for respondents to the Undergraduate Survey

Dollars per Week	N	%	x	Mdn	SD
	<u>2,439</u>		\$35.70	\$23.06	40.19
\$0	129	5.3			
\$1 - \$10	444	18.3			
\$11 - \$20	642	26.3			
\$21 - \$30	404	16.5			
\$31 - \$40	169	6.9			
\$41 - \$50	297	12.0			
\$51 or more	354	14.7			

Table 31

Overall satisfaction with experiences at  
the University of respondents to the Undergraduate Survey

Response <sup>a</sup>	N	%	x	SD
	<u>2,551</u>		4.5	1.23
Very dissatisfied	76	3.0		
Moderately dissatisfied	154	6.0		
Slightly dissatisfied	246	9.6		
Slightly satisfied	466	18.3		
Moderately satisfied	1,158	45.4		
Very satisfied	451	17.7		

<sup>a</sup>Responses were coded on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

Table 32

Differences among subgroups in overall satisfaction with University experiences of respondents to Undergraduate Survey, by subgroup<sup>a</sup>

Question Subgroup	N	x	SD	F-ratio	t-test
Total group	2,551	4.50	1.23		
Gender	<u>2,532</u>				3.82***
Female	1,290	4.59	1.22		
Male	1,242	4.41	1.24		
Year in school	<u>2,544</u>			4.76**	
Freshman	392	4.67	1.14		
Sophomore	527	4.57	1.19		
Junior	645	4.48	1.25		
Senior	980	4.41	1.27		
Race	<u>2,522</u>			.98	
American Indian	14	4.64	1.55		
Asian Pacific American	142	4.36	1.20		
Black/African American	42	4.67	.95		
Hispanic	21	4.76	.89		
Caucasian	2,303	4.51	1.23		
College	<u>2,413</u>			2.42**	
Agriculture	69	4.46	1.38		
Arch. & Landscape	39	4.41	1.29		
Biological Sciences	40	4.90	.98		
Education	79	4.94	.96		
General College	120	4.54	1.22		
Human Ecology	101	4.44	1.29		
Liberal Arts	1,399	4.47	1.24		
School of Manag.	93	4.78	1.02		
Natural Resources	36	4.36	1.38		
Institute of Tech.	437	4.41	1.27		

<sup>a</sup>Responses coded on a six-point scale from 1=Very dissatisfied to 6=Very satisfied.

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

Table 33

Descriptive statistics for admission data, academic progress  
and performance variables for students who  
responded to the Undergraduate Survey<sup>a</sup>

Variables <sup>b</sup>	N	x	Mdn	SD
High School Rank	1,371	75.3	81.4	21.2
ACT-Composite	868	23.2	23.9	4.8
Overall Univ. GPA	2,606	2.9	2.9	.6
Total Degree Credits <sup>c</sup>	2,609	123.3	122.9	60.8
Transfer GPA	884	2.9	2.9	.6
Total Transfer Credits	1,082	61.0	53.0	45.3
Fall 1989 Term GPA	2,317	2.9	3.0	.7
Winter 1990 Term GPA	2,408	2.9	3.0	.7
Spring 1990 Term GPA	2,448	2.9	3.0	.8
Fall 1989 Credits Compl.	2,609	10.6	12.1	5.0
Winter 1990 Cred. Compl.	2,609	10.7	12.1	4.8
Spring 1990 Cred. Compl.	2,609	10.3	11.7	4.5
Fall 1989 CEE Credits Completed <sup>d</sup>	2,609	.7	.1	2.1
Winter 1990 CEE Credits Completed <sup>d</sup>	2,609	.9	.1	2.2
Spring 1990 CEE Credits Completed <sup>d</sup>	2,609	.9	.2	2.1

<sup>a</sup>Data for these variables were obtained during Summer 1990 from Data and Reporting Services and were merged with questionnaire data for respondents with matching student identification numbers.

<sup>b</sup>All variables include grades and credits through spring quarter 1990.

<sup>c</sup>Approximately 19 percent of the students had completed more than 180 credits.

<sup>d</sup>The percentages who completed one or more credits in CEE were as follows: fall quarter 1989 (13.0%), winter quarter 1990 (16.4%), and spring quarter (19.0%).

For the total group of survey respondents, the average University GPA was 2.9. The mean number of credits completed was 123.3. Quarterly GPAs were 3.0 for fall quarter and 2.9 for winter and spring quarters. The average number of credits completed each quarter was 10.6, 10.7, and 10.3, respectively, for the total sample of students included in the study.

### Work Status Differences in GPA and Credits Completed

Students who had versus had not been employed since fall quarter 1989 were compared on quarterly GPA, overall GPA, and total degree credits.

As the results in Table 34 indicate, students who were employed had GPAs that were only slightly lower than the GPAs of students who did not work for each of the three quarters during the 1989-90 academic year, although the differences were statistically significant.

Whether or not a student works seems to have a slight impact on quarterly grade point average. Looking at the year as a whole, students who worked during the 1989-90 year also had slightly lower overall GPAs than students who did not work.

A more precise analysis of the relationship between working and academic performance and progress comes from an analysis of the total hours spent in paid employment. Table 35 compares five weekly hours worked groups in terms of quarterly credits attempted and credits completed and quarterly GPA. As the results indicate, there were statistically significant differences for all three variables for each of the quarters. The magnitude of the differences was considerably greater for the credits attempted and credits completed variables than for the quarterly GPA variables.

For example, for spring quarter 1990 students who worked 0 hours completed an average of 11.5 credits, students who worked between 1-10 hours completed 11.3 credits, students who worked 11-20 hours completed 10.6 credits, students who worked 21-30 hours completed 10.2 credits, and students who worked 31 or more hours completed 7.6 credits. The greatest reduction in average credits occurred in the transition from the 21-30 hours a week category to the more than 30 hours a week category.

Table 36 reports the correlations between several weekly hour variables, the school and work conflict scale, and overall GPA and quarterly GPA. The magnitude ( $r=.19$ ) of the correlation between hours spent studying and University GPA was identical to the correlation between hours spent working and University GPA, although the direction was reversed: the greater the number of hours spent studying, the higher the GPA. The relatively low correlations might be accounted for by unreliability of the hours of employment variable or by problems with the criterion variable of grade point average. There was a small ( $r=-.12$ ) negative correlation between the school and work conflict scale and overall grade point average and for GPA for winter and spring quarters: the greater the perceived conflict between school and work, the lower were GPAs.

Table 34

Comparison between students who worked versus those who did not work during the 1989 academic year on GPA and degree credits

Variable	Work status since Fall 1989						t
	Worked			Did not work			
	N	x	SD	N	x	SD	
UM-GPA	2,152	2.84	.58	433	3.00	.57	-5.18***
Fall '89 GPA	1,919	2.89	.72	384	3.05	.68	-3.88***
Winter '90 GPA	1,984	2.95	.73	411	3.07	.69	-3.05**
Spring '90 GPA	2,020	2.96	.74	410	3.04	.74	-2.01*

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

Table 35

Differences among five weekly-hours-worked groups  
in quarterly credits attempted, credits completed and GPA

Variable	Weekly hours in paid work										F-ratio
	0 hours		1-10 hours		11-20 hours		21-30 hours		31 + hours		
	N	x	N	x	N	x	N	x	N	x	
<u>Fall Quarter</u>											
Credits attempted	597	11.7	236	12.5	786	12.0	582	11.1	408	9.0	33.29 <sup>***</sup>
Credits completed	597	11.2	236	11.7	786	11.2	582	10.4	408	8.3	31.11 <sup>***</sup>
GPA	528	3.0	221	3.0	725	2.9	518	2.8	325	2.8	9.03 <sup>***</sup>
<u>Winter Quarter</u>											
Credits attempted	597	12.3	236	12.8	786	11.9	582	11.1	408	9.6	32.66 <sup>***</sup>
Credits completed	597	11.6	236	12.0	786	11.2	582	10.2	408	8.5	35.96 <sup>***</sup>
GPA	561	3.1	225	3.2	746	3.0	531	2.9	345	2.7	13.68 <sup>***</sup>
<u>Spring Quarter</u>											
Credits attempted	597	12.5	236	12.6	786	11.9	582	11.3	408	9.3	55.03 <sup>***</sup>
Credits completed	597	11.5	236	11.3	786	10.6	582	10.2	408	7.6	54.16 <sup>***</sup>
GPA	565	3.0	223	3.2	749	2.9	556	2.9	355	2.9	6.20 <sup>***</sup>

<sup>\*\*\*</sup>  $p < .001$

Table 36

Correlations between hours studying, paid work and  
work conflict and overall and quarterly University GPA  
for total sample of respondents to the Undergraduate Survey

Variable	UM-GPA r	F89-GPA r	W89-GPA r	S89-GPA r
Hours studying	.19 <sup>***</sup>	.13 <sup>***</sup>	.13 <sup>***</sup>	.13 <sup>***</sup>
Hours attending classes	.10 <sup>***</sup>	.03 <sup>***</sup>	.04 <sup>***</sup>	.05 <sup>***</sup>
Hours working M to F	-.15 <sup>***</sup>	-.09 <sup>***</sup>	-.09 <sup>***</sup>	-.06 <sup>***</sup>
Total hours paid work	-.19 <sup>***</sup>	-.12 <sup>***</sup>	-.14 <sup>***</sup>	-.09 <sup>***</sup>
Work conflict	-.12 <sup>***</sup>	-.09 <sup>***</sup>	-.05 <sup>**</sup>	-.01

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001



Table 37

Correlations between overall University GPA and hours studying,  
hours paid work and work conflict by gender and year in school

GPA	Total Hours Studying	Total Hours Paid Work	School/Work Conflict
	r	r	r
Total sample	.19 <sup>***</sup>	-.19 <sup>***</sup>	-.12 <sup>***</sup>
Women	.16 <sup>***</sup>	-.18 <sup>***</sup>	-.11 <sup>***</sup>
Men	.22 <sup>***</sup>	-.21 <sup>***</sup>	-.14 <sup>***</sup>
Freshmen	.22 <sup>***</sup>	-.24 <sup>***</sup>	-.13 <sup>**</sup>
Sophomores	.15 <sup>***</sup>	-.23 <sup>***</sup>	-.15 <sup>***</sup>
Juniors	.20 <sup>***</sup>	-.17 <sup>***</sup>	-.14 <sup>***</sup>
Seniors	.18 <sup>***</sup>	-.24 <sup>***</sup>	-.14 <sup>***</sup>

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

In order to examine relationships between work and performance variables for subgroups of students, separate correlations were calculated for men and women students and for each of the four year-in-school groups. The magnitude of the correlations were only slightly higher for men than for women students, and varied only slightly as a function of year in school. The correlation between hours spent studying and overall GPA was highest for freshmen and lowest for sophomores, although the difference was not especially large or meaningful.

#### Relationship Between Perceived Positive and Negative Effects and GPA, Total Credits and School/Work Conflict

In an attempt to understand how working affects performance and credits completed, students' responses to the positive and negative effects questions (summarized previously in Tables 20 and 21) were analyzed in relationship to overall GPA, total credits completed, and the three-item school/work conflict scale. In part, the analysis serves as a validation of the responses to the positive and negative effects items. Table 38 contains the results for the negative effects items and Table 39, for the positive effects items.

In terms of the negative effects, students who endorsed each of the items (except have not participated in supplemental educational activities) had lower overall GPAs than students who did not endorse the item. Receiving lower course grades and not having enough time to study were most likely to differentiate groups in terms of overall GPA. For total credits completed, students who reported the negative effect had completed a larger number of credits, due largely to the fact that as year increased students were more likely to endorse particular negative effects. Finally, students who endorsed each of the negative effects were more likely to report higher levels of conflict between school and work.

As expected, there were fewer relationships between perceived benefits and overall grade point average. Students who reported bringing work related examples into their classes had slightly higher overall GPAs than students who did not endorse the item. Students who indicated that working had benefitted them in terms of time management had slightly lower GPAs than students who did not report the benefit. The differences for all items for total credits completed were a function of the increased likelihood of checking a particular benefit as year in school increased. Finally, students who reported benefits in terms of time management, working better with other people, and increased personal responsibility had lower levels of school and work conflict than did other students.

#### FINANCIAL AID VARIABLES

The final set of analyses examined the relationship between survey and academic performance and progress variables and financial aid variables. The financial aid data described financial aid for only the 1989-90 year for the subset of students (N=1,454 or 55.3%) for whom financial aid information was available.

Table 38

Differences in mean University GPA, total credits, and school/work conflict as a function of perceived negative effects of working for respondents to the Undergraduate Survey

Negative Effect	UM-GPA			Total Credits			School/Work Conflict		
	Yes	No	t	Yes	No	t	Yes	No	t
	x	x		x	x		x	x	
Taken an incomplete in a course	2.6	2.9	-9.12 <sup>***</sup>	137.6	121.1	4.72 <sup>***</sup>	12.0	9.5	14.49 <sup>***</sup>
Taken fewer credits to have more time for work	2.8	2.9	-2.61 <sup>**</sup>	133.1	116.9	6.68 <sup>***</sup>	11.1	8.8	18.92 <sup>***</sup>
Have not taken a course I wanted to take	2.9	2.9	- .86	137.9	119.7	6.10 <sup>***</sup>	11.6	9.3	14.95 <sup>***</sup>
Have not part. in supp. educ. activ. (e.g., seminars)	2.9	2.8	2.16 <sup>*</sup>	136.8	115.9	8.44 <sup>***</sup>	10.9	9.1	15.04 <sup>***</sup>
Delayed fulfillment of prog. requiremts.	2.7	2.9	-4.78 <sup>***</sup>	142.6	117.7	8.88 <sup>***</sup>	11.6	9.2	16.75 <sup>***</sup>
Not done as well as I wanted to because of not having enough study time	2.7	3.0	-11.04 <sup>***</sup>	128.8	117.3	4.85 <sup>***</sup>	11.0	8.2	23.40 <sup>***</sup>
Insufficient time to study for exam.	2.8	2.9	- 6.25 <sup>***</sup>	129.5	117.8	4.93 <sup>***</sup>	11.2	8.3	24.86 <sup>***</sup>
Could take courses only at certain times due to work schedule	2.8	2.9	- 3.42 <sup>***</sup>	129.2	120.6	3.31 <sup>***</sup>	11.0	9.2	14.10 <sup>***</sup>
Had to leave class early/arrive late because of work	2.8	3.0	- 3.76 <sup>***</sup>	131.3	121.4	3.30 <sup>***</sup>	11.4	9.4	13.04 <sup>***</sup>
Taken easier courses to keep up my grades	2.7	2.9	- 3.76 <sup>***</sup>	114.8	124.2	-2.34 <sup>**</sup>	11.5	9.6	9.35 <sup>***</sup>
Received lower grades in my courses	2.7	3.0	-14.22 <sup>***</sup>	129.9	119.1	4.43 <sup>***</sup>	11.3	8.7	21.59 <sup>***</sup>
Missed a test	2.5	2.9	- 5.90 <sup>***</sup>	115.6	123.6	-1.28	13.0	9.7	10.71 <sup>***</sup>
Tiredness because of my work schedule	2.8	2.9	- 2.03 <sup>*</sup>	126.8	119.0	3.26 <sup>***</sup>	10.8	8.3	20.49 <sup>***</sup>

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

Table 39

Differences in mean University GPA, total credits, and school/work conflict as a function of perceived positive effects of working for respondents to the Undergraduate survey

Positive Effect	UM-GPA			Total Credits			School/Work Conflict		
	Yes	No	t	Yes	No	t	Yes	No	t
	x	x		x	x		x	x	
Brought work-related examples into class discussions	2.9	2.8	2.42*	149.1	114.9	12.73***	9.9	9.8	.32
Gained a better understanding of how to apply my knowledge	2.9	2.9	.23	139.2	114.7	9.97***	9.7	9.9	-1.48
Encouraged me to take courses I otherwise might not have taken	2.9	2.9	.25	134.1	121.7	3.47***	10.0	9.8	1.33
Increased my ability to think critically	2.9	2.9	-.95	136.5	117.9	7.17***	9.8	9.8	-.27
Increased my ability to raise questions and examine contrary views	2.9	2.9	-.48	137.9	118.0	7.45***	9.9	9.8	1.26
Increased my ability to write effectively and clearly	2.9	2.9	1.59	146.1	120.2	7.09***	9.7	9.9	1.17
Helped me to speak effectively and clearly	2.8	2.9	-1.24	132.3	119.3	5.05***	9.8	9.9	-.08
Helped me to manage my time more effectively	2.9	2.9	-1.53	125.1	121.4	1.56	9.6	10.2	-4.85***
Increased my ability to work well with other people	2.8	2.9	-2.92**	127.3	116.7	4.34***	9.7	10.1	-3.12**
Made me take more personal responsibility for my work	2.8	2.9	-4.42*	125.5	121.5	1.67	9.6	10.1	-3.84***

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

Table 40 describes the characteristics of students for whom financial aid data were available. Comparing the statistics in Table 40 with those previously reported in Table 1 for the total sample indicates very similar characteristics for most variables. There were about three percent more students of color in the financial aid data set than for the total group, and a slightly higher percentage of freshmen and a slightly lower percentage of seniors.

### Descriptive Statistics

To insure that the financial aid variables were in the range of what might be expected, descriptive statistics were calculated and compared with summary statistics currently being produced by the Office of Student Financial Aid. Table 41 contains the means and medians for each of the financial aid variables used in the subsequent analyses. For example, for students' adjusted gross income, the mean was \$7,104 and the median was \$4,967. For this and other variables, comparisons with other statistics suggested that the averages were comparable to the total group of students in the financial aid data base.

Since dependency status is an important dimension of financial aid statistics, Table 41 also contains a comparison between independent and dependent students for each of the financial aid variables used in the analysis. In general, students under 24 years of age are considered to be dependent unless they are married or a veteran. The two groups differed in expected ways in the financial aid variables used in the analysis. Of those who reported in the survey that they received no funds from parents, relatives or friends, and were also in the financial aid data base, just slightly more than half (52.3%) are considered technically independent. It seems that many respondents consider themselves to be independent even though they do not meet the guidelines.

### Comparisons Between Students who were Employed Versus were Not Employed

The first set of results, contained in Table 42, compares those students who did versus did not work since fall quarter 1989 on selected financial aid variables. The two groups are compared for the total group of students as well as separately for students classified as financially independent and financially dependent. Given that independent and dependent students were shown in Table 41 to differ, the following discussion focuses on differences in work status within the two groups.

Comparisons between students who worked and those who did not were statistically significant for six of the variables for financially independent students, and for two of the variables for financially dependent students. For independent students, student adjusted income was higher for students who did not work (although only 46 students were in this category), possibly as a function of their marital status or other family income variables. Expected family contribution was lower for students who did not work. Total aid

Table 40

Descriptive statistics for subset of respondents (N=1,454) to the Undergraduate Survey for whom financial aid data were available

Question Response	N	%	x
Year in school	<u>1,417</u>		
Freshman	256	18.1	
Sophomore	275	19.4	
Junior	362	25.5	
Senior	524	37.0	
Gender	<u>1,454</u>		
Female	738	50.8	
Male	716	49.2	
Race	<u>1,403</u>		
American Indian	12	.9	
Asian/Pacific Islander	103	7.3	
Black/African American	32	2.3	
Hispanic (Chicano/Latino)	13	.9	
Caucasian	1,243	88.6	
College	<u>1,432</u>		
CLA	764	53.4	
IT	252	17.6	
GC	74	5.2	
Education	49	3.4	
Human Ecology	58	4.1	
Agriculture	44	3.1	
Other	191	13.3	
Satisfaction with University	<u>1,416</u>		4.5
Age	<u>1,434</u>		21.8
UM GPA	<u>1,453</u>		2.88

Table 41

Descriptive statistics for financial aid variables  
for students who completed the Undergraduate Survey  
and for whom financial aid information was available<sup>a,b</sup>:  
Total group and by financial dependency status

Variable <sup>c</sup>	N	%	x	Mdn	Dependency Status				t
					Independent		Dependent		
					N	x	N	x	
Students' adjusted gross income	1,193		\$ 7,104.53	\$ 4,967.25	463	\$ 11,710.83	726	\$ 4,151.04	-19.71***
Parents' adjusted gross income	849		\$ 36,031.16	\$ 34,111.25	21	\$ 35,473.90	828	\$ 36,045.29	.12
Total aid offered to student	1,312		\$ 4,572.02	\$ 4,047.50	494	\$ 5,660.94	740	\$ 4,052.47	-11.66***
Student budget	1,446		\$ 9,087.66	\$ 9,374.01	513	\$ 9,631.27	856	\$ 8,638.97	- 9.62***
Expected Family contribution	1,322		\$ 5,116.74	\$ 3,947.50	483	\$ 3,214.91	836	\$ 6,204.33	10.67
Gross financial need	1,169		\$ 5,796.86	\$ 5,663.00	492	\$ 7,150.32	670	\$ 4,783.97	-14.67***
Unmet financial need	756		\$ 2,061.77	\$ 1,669.00	371	\$ 2,376.17	378	\$ 1,679.92	-5.83***

--Table 41 continued--

(Table 41 continued)

Variable <sup>c</sup>	N	%	x	Mdn	Dependency Status				t
					Independent		Dependent		
					N	x	N	x	
Aid preference type <sup>d</sup>	<u>1,328</u>								
Work	243	18.3							
Loan	819	61.7							
Both	266	20.0							
Federal dependency status	<u>1,369</u>								
Dependent	856	62.5							
Independent	513	37.5							
Amount of grant aid offered	837		\$ 2,204.61	\$ 2,299.99	366	\$ 2,452.91	463	\$ 2,031.01	-5.07***
Amount of grant aid paid	827		\$ 2,028.49	\$ 2,108.25	359	\$ 2,143.24	460	\$ 1,959.08	-2.25*
Amount of loan aid offered	1,000		\$ 3,173.02	\$ 2,625.42	425	\$ 3,746.04	575	\$ 2,749.49	-9.57***
Amount of loan aid paid	931		\$ 2,883.74	\$ 2,467.50	407	\$ 3,418.26	524	\$ 2,468.57	-10.40***
Amount of scholarship aid offered	287		\$ 1,974.02	\$ 1,250.00	59	\$ 1,565.85	154	\$ 1,827.24	1.03
Amount of scholarship aid paid	187		\$ 1,491.45	\$ 1,000.16	41	\$ 1,398.68	99	\$ 1,593.39	.85

--Table 41 continued--



(Table 41 continued)

Variable <sup>c</sup>	N	%	x	Mdn	Dependency Status				t
					Independent		Dependent		
					N	x	N	x	
Amount of work aid offered	125		\$ 3,123.65	\$ 2,872.00	57	\$ 3,420.46	68	\$ 2,874.85	-1.81
Amount of work aid paid	101		\$ 1,971.22	\$ 1,659.72	40	\$ 1,719.63	61	\$ 2,354.90	-2.42*

<sup>a</sup>The office of Student Financial Aid provided financial aid data that was merged by Data and Reporting Services with questionnaire data and academic progress and performance information.

<sup>b</sup>These descriptive statistics pertain to the 1,454 respondents (55.7%) for which there was a financial aid match. Not all of those for whom there was a match did, in fact, receive any financial aid.

<sup>c</sup>Appendix C describes each of the financial aid variables.

<sup>d</sup>Independent students' aid preferences were: work(N=160,19.3%), loan (N=468,56.4%), both (N=202,24.3%).  
Dependent students' aid preferences were: work(N=83,16.8%), loan (N=348,70.4%), both (N=63,12.8%).

Table 42

Comparisons between students who worked versus those who  
did not for selected financial aid variables:  
Total group and financially independent versus financially  
dependent status

Fin. Aid Var.	Work Status since Fall 1989							Financially Independent					Financially Dependent				
	Worked			Did not Work			t	Worked		Did not Work		t	Worked		Did not Work		t
	N	x	SD	N	x	SD		N	x	N	x		N	x	N	x	
Stud. Adj. Inc.	1,049	\$ 6,870.11	6,713.33	134	\$ 7,902.74	11,381.20	-1.38	410	\$11,044.90	46	\$17,401.17	-4.28	635	\$4,320.15	88	\$ 2,937.65	4.48***
Par. Adj. Inc.	720	\$35,710.67	20,188.25	125	\$37,232.05	23,028.67	-.76	16	\$29,545.63	4	\$43,055.75	-1.06	704	\$35,850.78	121	\$37,039.53	-.59
Tot. Aid Offer.	1,092	\$ 4,500.06	2,515.92	210	\$ 4,923.96	2,802.82	-2.19	418	\$ 5,571.99	68	\$ 6,238.49	-1.99	627	\$ 4,015.23	111	\$ 4,271.00	-1.11
Student Budj.	1,207	\$ 9,055.29	1,907.81	227	\$ 9,269.37	2,237.37	-1.51	435	\$ 9,634.99	69	\$ 9,709.41	-.28	723	\$ 8,653.06	130	\$ 8,550.80	.63
Ex. Fm. Contr.	708	\$ 6,188.22	5,433.27	125	\$ 6,262.57	5,773.51	-.14	418	\$ 3,355.43	57	\$ 2,100.88	2.42	708	\$ 6,188.22	125	\$ 6,262.57	-.14
Gross Fin. Need	991	\$ 5,704.86	2,935.03	168	\$ 6,318.80	3,106.37	-2.49	416	\$ 7,008.51	68	\$ 8,096.60	-2.94	569	\$ 4,720.18	99	\$ 5,150.32	-1.51
Unmet Need	635	\$ 2,037.61	1,708.19	116	\$ 2,177.18	1,802.61	-.80	313	\$ 2,334.24	54	\$ 2,475.00	-.54	316	\$ 1,625.76	61	\$ 1,948.82	-1.65
Grant Am. Off.	705	\$ 2,162.93	1,111.93	126	\$ 2,420.60	1,435.96	-2.21	308	\$ 2,370.61	53	\$ 2,887.96	-2.95	390	\$ 2,020.72	72	\$ 2,103.24	-.54
Grant Am. Paid	697	\$ 1,985.89	1,115.28	125	\$ 2,253.74	1,416.91	-2.37	301	\$ 2,063.66	53	\$ 2,576.98	-3.04	389	\$ 1,944.83	71	\$ 2,037.14	-.61
Loan Am. Off.	858	\$ 3,148.42	1,668.05	132	\$ 3,311.98	1,808.16	-1.03	359	\$ 3,750.52	58	\$ 3,749.87	.00	499	\$ 2,715.25	74	\$ 2,968.77	-1.37
Loan Am. Paid	802	\$ 2,872.10	1,436.41	121	\$ 2,955.65	1,625.64	-.59	345	\$ 3,416.18	56	\$ 3,480.43	-.27	457	\$ 2,461.36	65	\$ 2,503.53	-.28
Schol. Am. Off.	207	\$ 1,477.49	1,250.33	79	\$ 3,293.72	2,992.25	-7.25	45	\$ 1,398.45	13	\$ 2,227.31	-1.82	118	\$ 1,561.68	36	\$ 2,697.67	-3.57
Schol. Am. Paid	142	\$ 1,424.83	1,116.24	44	\$ 1,734.64	1,406.34	-1.51	30	\$ 1,270.09	10	\$ 1,899.30	-1.38	76	\$ 1,530.71	23	\$ 1,800.52	-.93
Work Am. Off.	113	\$ 3,197.47	1,704.05	12	\$ 2,428.50	1,476.01	1.50	48	\$ 3,574.46	9	\$ 2,599.11	1.44	65	\$ 2,919.07	3	\$ 1,916.67	1.14
Work Am. Paid	96	\$ 1,999.14	1,305.71	5	\$ 1,435.20	1,704.31	.93	36	\$ 2,435.11	4	\$ 1,633.06	1.07	60	\$ 1,737.56	1	\$ 643.76	.90

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

offered was higher for students who did not work, as was gross financial need, and both grant amount offered and paid were higher. For dependent students, students who worked had higher means for student adjusted income and a lower mean for scholarship amount offered.

#### Relationship Between Admissions Data and Survey Responses, Academic Performance, and Financial Aid Variables

The next set of analyses examined selected financial aid variables in relationship to responses to selected survey items, to indices of academic success and progress, and to selected financial aid variables. The number of individuals in each of the correlational analyses varied since admissions data were available only for students who began as new freshmen and financial aid information was available only for those who applied for financial aid.

As the results in Table 43 indicate, most of the correlations were low, although because of the size of the sample many were statistically significant. The highest correlation was  $r=.38$  between both high school rank and ACT-Composite score and overall University GPA. This correlation is similar in magnitude to other correlations between admissions data and GPA that have been obtained for University students.

High school rank had a low positive correlation ( $r=.11$ ) with weekly hours studying, but a low negative correlation ( $r=-.10$ ) with weekly hours working. Students who had a higher rank in high school were likely to spend more hours studying and fewer hours working. In both cases, high school rank accounted for only one percent of the variation in the two variables.

The finding that both high school rank and ACT-Composite had low negative correlations with the index of school and work conflict suggests that students who enter the University with higher performance are slightly less likely to experience conflict between school and work.

For some of the financial aid variables, different correlations were obtained for high school rank versus test data. Students' adjusted income had a negative correlation with high school rank, but no correlation with test data. Students with a higher adjusted income were likely to have a lower high school rank. Parents' adjusted income did not correlate with high school rank, but was positively correlated with test data. Students with higher ACT scores were likely to have parents with higher adjusted incomes. Gross need did not correlate with high school rank, but was negatively correlated with test data. Students with high ACT scores and high school rank were likely to have lower gross needs.

Expected family contribution had a low positive correlation for high school rank. For both grant amount offered and grant amount paid, there was a low negative correlation with both

Table 43

Correlations between selected questionnaire items,  
academic performance variables and financial aid variables  
and admissions data: High school rank and ACT-Composite

Variable	<u>High school rank</u>		<u>ACT-Composite</u>	
	N	r	N	r
Weekly hours studying	1,359	.11 <sup>***</sup>	857	.10 <sup>**</sup>
Weekly hours attending class	1,363	.11 <sup>***</sup>	860	.11 <sup>***</sup>
Working at job M-F	1,363	-.06 <sup>*</sup>	860	-.04
Working at job weekend	1,361	-.11 <sup>***</sup>	858	-.06 <sup>*</sup>
Total hours paid work	1,361	-.10 <sup>***</sup>	858	-.06 <sup>*</sup>
Total summer jobs	1,224	-.01	777	.01
Total school year jobs	1,227	-.07 <sup>**</sup>	779	.02
Total jobs	1,223	-.06 <sup>*</sup>	777	.01
Work/school conflict	1,205	-.15 <sup>***</sup>	764	-.14 <sup>***</sup>
Hourly Salary	1,089	.02	682	.07 <sup>*</sup>
Job Satisfaction	1,108	.10 <sup>***</sup>	696	.10 <sup>**</sup>
Work to pay for college expenses	1,224	.08 <sup>**</sup>	777	.02
Work to cover living expenses	1,220	.01	774	.05
Educational expenses from parents, relat. or friends	1,357	-.01	858	.05
Percentage of resources spent on tuition	1,268	.04	802	-.07 <sup>*</sup>
Knowledge of personal finances	1,346	.02	849	.18 <sup>***</sup>
Satisfaction with University	1,338	.06 <sup>*</sup>	847	.11 <sup>***</sup>
U of M overall GPA	1,369	.38 <sup>***</sup>	867	.38 <sup>***</sup>
Total degree credits	1,371	.25 <sup>***</sup>	868	.16 <sup>***</sup>

--Table 43 continued--

(Table 43 continued)

Variable	High school rank		ACT-Composite	
	N	r	N	r
Student adjusted income	615	-.20 <sup>***</sup>	397	-.01
Parents' adjusted income	615	.01	423	.14 <sup>**</sup>
Total aid	706	-.11 <sup>***</sup>	458	-.22 <sup>***</sup>
Student budget	791	-.01	515	-.04
Expected family contribution	769	.15 <sup>***</sup>	503	.16 <sup>***</sup>
Gross need	586	-.05	383	-.18 <sup>***</sup>
Unmet need	361	-.04	226	-.02
Grant offered	448	-.16 <sup>***</sup>	290	-.31 <sup>***</sup>
Grant paid	443	-.10 <sup>*</sup>	287	-.29 <sup>***</sup>
Loan offered	490	-.02	327	.00
Loan paid	446	-.04	300	.01
Scholarship offered	195	-.20 <sup>**</sup>	138	-.21 <sup>**</sup>
Scholarship paid	124	.06	81	-.11
Work offered	69	-.05	51	-.16
Work paid	62	.01	45	-.04

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

high school rank and test data, although the magnitude of the correlation was greater for the test data. Students with high ACT scores and high school rank were likely to have a lower grant amount offered and paid. For scholarship amount offered, there was a low negative correlation for both high school rank and test data, although the correlation was based on a relatively small number of individuals.

The final analysis, reported in Table 44, compared three total aid offered groups (i.e., those offered from \$100 - \$3,100, those offered \$3,101 - \$5,500, and those offered \$5,501 and above) in items of unmet need, total hours worked, GPA's and quarterly credits completed. As expected, differences were statistically significant for unmet need after considering the financial aid offered: those in the lowest aid category had an unmet need of \$2,177 compared to \$1,769 in the highest aid category. The three groups were similar in terms of total weekly hours worked, suggesting that total aid offered had no direct effect on students' employment. Although the three groups differed for fall quarter GPA (students in the lowest aid category had the highest GPA) there were no significant differences in winter quarter GPA, spring quarter GPA or overall GPA. For two of the three quarters, there were statistically significant differences in quarterly credits completed: students in the lowest aid category completed the highest mean number of credits and students in the highest aid category completed the lowest mean number of credits.

Table 44

Differences among three total financial aid offered categories and grade point averages and credits completed for students who received financial aid

Variable	Total Aid Offered <sup>a</sup>						F-ratio
	Low(\$100-\$3,100)		Med.(\$3,101-\$5,500)		High(\$5,501-\$15,557)		
	N	x	N	x	N	x	
Unmet need	182	\$2,177.49	274	\$2,004.23	271	\$1,769.31	3.98*
Total hours worked	419	17.77	455	18.49	425	16.53	2.51
Overall GPA	422	2.91	457	2.83	432	2.91	2.83
Fall Qtr. 1989 GPA	384	2.98	411	2.85	391	2.91	3.63*
Wtr. Qtr. 1990 GPA	392	2.98	434	2.93	413	2.99	.79
Spr. Qtr. 1990 GPA	399	2.98	433	2.94	395	3.00	.65
Fall Qtr. 1989 credits completed	422	11.34	457	11.21	433	10.48	3.90*
Wtr. Qtr. 1990 credits completed	422	11.31	457	11.33	433	10.84	1.65
Spr. Qtr. 1990 credits completed	422	11.01	457	10.80	433	10.06	5.33**

<sup>a</sup>The three total aid categories were formed based on the cumulative frequency distribution such that approximately one-third were in each of the categories.

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APPENDIX A  
Undergraduate Survey

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UNDERGRADUATE SURVEY

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Even if you do not consider yourself a traditional undergraduate student or have not worked while in school, we would like you to complete this survey.

All responses will be kept confidential and used only in a summary fashion.

Your student I.D. number will allow the use of student demographic data (e.g., county of residence) from the student record system so that differences among subgroups of students can be examined. Please indicate your University of Minnesota student identification number: \_\_\_\_\_

- Q1. How many quarters including the current quarter, have you done each of the following while a student at the University of Minnesota? Consider only fall, winter and spring quarters. (If zero, write "0".)

\_\_\_\_\_ Number of quarters you worked 40 hours or more a week at a paid job and attended school (excluding summer session).  
\_\_\_\_\_ Number of quarters you worked less than 40 hours a week at a paid job and attended school (excluding summer session).  
\_\_\_\_\_ Number of quarters you dropped out of school to work full-time at a paid job (excluding summer sessions).  
\_\_\_\_\_ Number of quarters you took night courses in Continuing Education and Extension to better accommodate your work schedule.

- Q2. On the average, about how many hours per week (this quarter) do you spend in each of the following activities? Round to the nearest whole number and if it varies a lot, use a recent week as an example. (If zero, write "0".)

\_\_\_\_\_ Studying  
\_\_\_\_\_ Attending classes  
\_\_\_\_\_ Working at a paid job Mondays to Fridays  
\_\_\_\_\_ Working at a paid job on weekends  
\_\_\_\_\_ Working at an unpaid position (e.g., internship, student teaching, or other)  
\_\_\_\_\_ Doing unpaid community service work  
\_\_\_\_\_ Participating in University clubs, groups, or athletics  
\_\_\_\_\_ Taking care of home and/or family

- Q3. Have you worked for pay at any time since classes started fall quarter of 1989? (Circle one.)

1. Yes -- CONTINUE WITH SECTION I on page 2  
2. No -- SKIP TO SECTION II on page 4

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SECTION I: EMPLOYMENT EXPERIENCES DURING THE CURRENT SCHOOL YEAR

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This set of questions concerns paid work experiences during the current school year.

- Q4. Please indicate your current work settings relative to work-study status and where the employment is located. (Circle all that apply.)
- U of M Work-Study Program
  - U of M but not a Work-Study Program
  - Not for the U of M but within a mile of campus
  - Not for the U of M and more than a mile from campus

- Q5. Do you currently have more than one paid job? (Circle one.)
- Yes - How many different paid jobs do you currently have? \_\_\_\_\_
  - No

Please let your responses to the following questions reflect the paid job that involves more of your time than the others. Consider this your primary job.

- Q6. Which one of the following best describes the nature of your primary job? (Circle one.)
- Sales (e.g., salesperson, cashier, counter person)
  - Service (e.g., janitor, cook, waitress, hairdresser)
  - Skilled trades (e.g., electrician, auto mechanic)
  - Unskilled labor (e.g., machine operator, construction)
  - Professional/managerial (e.g., health care professional, business manager, teacher)
  - Clerical or office (e.g., typist, file clerk, bookkeeper, computer operator)
  - Other (Please specify) \_\_\_\_\_
- Q7. What is your hourly salary for your current primary job?
- \$ \_\_\_\_\_/hr.
- Q8. How long have you had your present primary job? (Circle one.)
- 0 - 5 months
  - 6 months - 1 year
  - 1 - 2 years
  - 3 - 5 years
  - More than 5 years

Q9. Please rate your present job satisfaction on each of the following factors for your primary job.

	<i>Very Dissatisfied</i>	<i>Dissatisfied</i>	<i>Neutral</i>	<i>Satisfied</i>	<i>Very satisfied</i>
a. Pay	1	2	3	4	5
b. Flexibility of work hours	1	2	3	4	5
c. Opportunity to make your own decisions	1	2	3	4	5
d. Opportunity to learn new things	1	2	3	4	5
e. Contribution to your overall career plans	1	2	3	4	5
f. Opportunity to use your skills & abilities	1	2	3	4	5
g. Opportunity to have a lot of responsibility	1	2	3	4	5
h. Being helpful to others or useful to society	1	2	3	4	5
i. Recognition for the work you do	1	2	3	4	5
j. Nature of job duties	1	2	3	4	5
k. Relationship with co-workers	1	2	3	4	5
l. Quality of supervision or management	1	2	3	4	5
m. Other (Specify) _____	1	2	3	4	5

Q10. In general, how satisfied are you with your primary job? (Circle one.)

1. Very dissatisfied
2. Moderately dissatisfied
3. Dissatisfied
4. Satisfied
5. Moderately satisfied
6. Very satisfied

**SECTION II: EFFECTS OF PAID WORK EXPERIENCE**

This section concerns your opinions about the effects of your paid work experiences during all your years at the University. If you never worked for pay since being a student at the University, please skip to Section III, page 7.

Q11. Approximately how many different jobs for pay have you held since you started at the University of Minnesota?

Indicate the number of university jobs and all other jobs, as well as jobs held during the time you attend classes and during the time (summer) you are not in school. If you hold the job year-round, count it for summer and count it while attending classes. (Please circle one number on each line.)

Number of Jobs While Attending Classes

a. University: 0 1 2 3 4 5 6 7 8 9 10 11 12 or more  
 b. Other: 0 1 2 3 4 5 6 7 8 9 10 11 12 or more

Number of Jobs During Summer Vacation

a. University: 0 1 2 3 4 5 6 7 8 9 10 11 12 or more  
 b. Other: 0 1 2 3 4 5 6 7 8 9 10 11 12 or more

Q12. Different students have different reasons for working while attending school. Please rate the importance of each of the following reasons in your decision to work. (Circle one response for each item.)

	<u>Not at all Important</u>	<u>Slightly Important</u>	<u>Important</u>	<u>Very Important</u>	<u>Extremely Important</u>
a. To pay for college expenses	1	2	3	4	5
b. To cover current living expenses	1	2	3	4	5
c. To feel competent	1	2	3	4	5
d. To have money to enhance my reputation	1	2	3	4	5
e. To have extra money in case I need it	1	2	3	4	5
f. To be able to buy things for and entertain others	1	2	3	4	5
g. To be able to buy things and do things for myself	1	2	3	4	5
h. To learn new skills	1	2	3	4	5
i. To help me with career decisions	1	2	3	4	5
j. To be involved in something important	1	2	3	4	5
k. To help structure my time better	1	2	3	4	5
l. Other (Specify) _____	1	2	3	4	5

Q13. Please indicate how your life as a student has been positively affected by your working at a paid job during your years at the University. (Circle all that apply.)

- a. No positive effects
- b. Brought work-related examples into class discussions
- c. Gained a better understanding of how to apply my knowledge
  
- d. Encouraged me to take courses I otherwise might not have taken
- e. Increased my ability to think critically
- f. Increased my ability to raise questions and examine contrary views
  
- g. Increased my ability to write effectively and clearly
- h. Helped me to speak effectively and clearly
- i. Helped me to manage my time more effectively
  
- j. Increased my ability to work well with other people
- k. Made me take more personal responsibility for my work
- l. Other (Specify): \_\_\_\_\_

Q14. Please indicate how your life as a student has been negatively affected by your working at a paid job during your years at the University? (Circle all that apply.)

- a. No negative effects
- b. Taken an incomplete in a course
  
- c. Taken fewer credits to have more time for work
- d. Have not taken a course I wanted to take
  
- e. Have not participated in supplemental educational activities (e.g, seminars)
- f. Delayed fulfillment of program requirements
  
- g. Not done as well as I wanted to because of not having enough study time
- h. Insufficient time to study for examinations
  
- i. Could take courses only at certain times because of work schedule
- j. Had to leave class early/arrive late because of work schedule
  
- k. Taken easier courses to keep up my grades
- l. Received lower grades in my courses
  
- m. Missed a test
- n. Tiredness because of my work schedule
- o. Other (Specify): \_\_\_\_\_



Q15. Have you ever dropped out of school because of difficulties in combining school and work obligations? (Circle one.)

1. Yes            2. No

Sometimes your roles of student and paid employee blend well with each other. At other times the demands of work and school may conflict. Indicate your answers to the following three aspects of possible conflict you have experienced.

Q16. How compatible (congruent/mutually beneficial) has work and school been for you?

1. Extremely Incompatible
2. Very Incompatible
3. Incompatible
4. Neutral
5. Compatible
6. Very Compatible
7. Extremely Compatible

Q17. How frequently have role conflicts occurred between paid work and school?

1. Never
2. Rarely
3. Seldom
4. Occasionally
5. Regularly
6. Frequently
7. Constantly

Q18. How intense/disruptive have the conflicts between school and work been for you?

1. Insignificant
2. Very Mild
3. Mild
4. Moderate
5. Strong
6. Very Strong
7. Intense

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**SECTION III: PERSONAL FINANCES**

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This section concerns your personal finances during your years as an undergraduate at the University of Minnesota.

Q19. Have you had any concern about your ability to finance your college education? (Circle one.)

1. None (I am confident that I will have sufficient funds)
2. Some concern (but I will probably have enough funds)
3. Major concern (not sure I will have enough funds to complete college)

Q20. Did you ever have to drop out of school in order to have enough money to return to school? (Circle one.)

1. Yes
2. No

Q21. How much of this year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? (Circle your response for each of the possible sources.)

		\$1	\$1000	\$2000	\$3000	\$4000	\$5000
		to	to	to	to	to	or
	<u>None</u>	<u>\$999</u>	<u>\$1999</u>	<u>\$2999</u>	<u>\$3999</u>	<u>\$4999</u>	<u>Over</u>
a. Parents, relatives or friends	1	2	3	4	5	6	7
b. Spouse/Significant Other	1	2	3	4	5	6	7
c. Savings from summer work	1	2	3	4	5	6	7
d. Other savings	1	2	3	4	5	6	7
e. Part-time job on campus	1	2	3	4	5	6	7
f. Part-time job off campus	1	2	3	4	5	6	7
g. Full-time job while in college	1	2	3	4	5	6	7
h. Aid which does not need to be repaid	1	2	3	4	5	6	7
i. Aid which must be repaid	1	2	3	4	5	6	7
j. Other _____	1	2	3	4	5	6	7

Q22. Considering all your financial resources what percentage do you use for each of the following purposes in a year? (The total should sum to 100%.)

- |   |       |       |
|---|-------|-------|
| a. Tuition  | _____ | %     |
| b. Other school expenses (e.g., books and supplies)         | _____ | %     |
| c. Room and board (e.g., rent, dormitory fees, groceries)   | _____ | %     |
| d. House payments   | _____ | %     |
| e. Family support   | _____ | %     |
| f. Transportation (e.g., bus fees, bicycle/auto repair)     | _____ | %     |
| g. Clothing   | _____ | %     |
| h. Other purchases (e.g., records, tapes, sports equipment) | _____ | %     |
| i. Entertainment (e.g., movies, sports events, etc.)        | _____ | %     |
| j. Insurance  | _____ | %     |
| k. Savings  | _____ | %     |
| l. Money given to others                                    | _____ | %     |
| m. Vacation trips   | _____ | %     |
| n. Other (Please specify) _____                             | _____ | %     |
|   |       | 100 % |

Q23. Considering all your sources of income (paid work, loans, scholarships, etc.), how much money do you have left to spend in an average week during the school year after you have paid for school related expenses, transportation, and room and board?

\$ \_\_\_\_\_ dollars per week.

Q24. If you were not working for pay, would you still be able to attend the University? (Circle one.)

1. Yes
2. No
3. Don't work for pay

Q25. Approximately how much money do you presently owe for educational loans? (Circle one.)

1. None
2. \$500 or less
3. \$501 - \$1,000
4. \$1,001 - \$2,000
5. \$2,001 - \$4,000
6. \$4,001 - \$6,000
7. \$6,001 - \$8,000
8. \$8,001 - \$10,000
9. Over \$10,000

Q26. Please estimate your personal annual income before taxes for 1989. (Include paid work, fellowships, scholarships, and other money paid to you. Exclude loans and money given to you by your family.)

- |                      |                         |
|----------------------|-------------------------|
| 1. None              | 7. \$5,001 - \$8,000    |
| 2. \$1,000 or less   | 8. \$8,001 - \$10,000   |
| 3. \$1,001 - \$2,000 | 9. \$10,001 - \$15,000  |
| 4. \$2,001 - \$3,000 | 10. \$15,001 - \$20,000 |
| 5. \$3,001 - \$4,000 | 11. Over \$20,000       |
| 6. \$4,001 - \$5,000 |                         |

Q27. Parents vary in their attitudes towards who should pay for college. Which statement would you say is closest to your parents' view of payment for your college expenses? (Circle one.)

0. Doesn't apply to me
1. They believe that they have all or almost all of the financial responsibility for my college costs
2. They believe that the costs should be shared with me but that they should pay the larger share
3. They believe that the costs should be shared equally between us
4. They believe that the costs should be shared with me but that I should pay the larger share
5. They believe that I should pay for my own college education

Q28. Circle the one phrase that most accurately describes your parents' current economic status. (Circle one.)

0. Doesn't apply to me
1. Have difficulty in getting the necessities
2. Sometimes have difficulty making ends meet
3. Have all the necessities but not many luxuries
4. Comfortable but not well-to-do
5. Have living standard well above the average
6. Wealthy

Q29. Students vary in their knowledge about personal financial planning issues, such as interest rates, taxes, and savings plans. How would you rate your level of knowledge? (Circle one.)

1. Poor
2. Fair
3. Good
4. Very Good
5. Excellent

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SECTION IV: DESCRIPTIVE CHARACTERISTICS

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Please answer each of the following questions about yourself.

Q30. Did you work at a steady paid job any time while you were in high school?  
Do not include work during the summers, or work that you did only occasionally.  
(Circle one.)

1. Yes (If Yes, answer "a" below)
2. No

a. If you worked during the school year while in high school, which of your high school years were they? Do not include work during the summers. (Circle all that apply.)

- a. H.S. freshman
- b. H.S. sophomore
- c. H.S. junior
- d. H.S. senior

Q31. What factors were important to you in your decision to enter the University of Minnesota? (Circle all that apply.)

- a. Location in a large metropolitan area
- b. Size of the University
- c. High quality of the University's programs
- d. Opportunity to get a part-time job at the University
- e. Cost of attending the University
- f. Scholarship and financial aid offered to me
- g. Reputation of the University
- h. Only school in geographical area that offers my major

Q32. What is the highest degree you expect to earn? (Circle one.)

1. I do not expect to complete any degree
2. Associate (A.A. or equivalent)
3. Bachelor's (B.A., B.S., etc.)
4. Master's degree (M.A., M.S., etc.)
5. Doctoral degree (PhD., EdD) or advanced professional degree (M.D., J.D., etc.)

Q33. What year are you in school? (Circle one.)

1. Freshman
2. Sophomore
3. Junior
4. Senior

Q34. What is your race? (Circle one.)

1. American Indian
2. Asian Pacific American
3. Black/African American
4. Hispanic (Chicano/Latino)
5. Caucasian

Q35. Are you an international student? (Circle one.)

1. Yes
2. No

Q36. What was your age on your last birthday? \_\_\_\_\_ years

Q37. Are you female or male?

1. Female
2. Male

Q38. Which one of the following best describes your current life situation?  
(Circle one)

1. Single without children
2. Single parent
3. Married without children
4. Married with children

Q39. Number of dependents other than yourself?

\_\_\_\_\_

Q40. Where are you currently residing? (Circle one.)

1. Dormitory, university residence halls, fraternity/sorority house
2. With parents or relatives
3. Other

Q41. In general, how satisfied are you with your experience at the University?  
(Circle one.)

1. Very Dissatisfied
2. Moderately Dissatisfied
3. Slightly Dissatisfied
4. Slightly Satisfied
5. Moderately Satisfied
6. Very Satisfied

042. In what college at the University are you currently enrolled?

- |                                |                             |
|--------------------------------|-----------------------------|
| 01. Agriculture                | 13. Medical School          |
| 02. Architecture and Landscape | 14. Medical Technology      |
| 03. Biological Sciences        | 15. Mortuary Science        |
| 04. Dental Hygiene             | 16. Natural Resources       |
| 05. Dentistry                  | 17. Nursing                 |
| 06. Education                  | 18. Occupational Therapy    |
| 07. Extension                  | 19. Pharmacy                |
| 08. General College            | 20. Physical Therapy        |
| 09. Home Economics             | 23. Public Health           |
| 10. Law                        | 22. Institute of Technology |
| 11. Liberal Arts               | 23. University College      |
| 12. School of Management       | 24. Veterinary Medicine     |

043. Please add any additional comments you would like to make about how work has affected school or school has affected work.

--THANK YOU FOR YOUR TIME AND COOPERATION--

Please return your completed survey to:

School and Work Survey  
Minnesota Center for Survey Research  
University of Minnesota  
2122 Riverside Avenue  
Minneapolis, MN 55454

APPENDIX B

(Portions of)

Minnesota Center for Survey Research Report

TECHNICAL REPORT 90-11

Submitted to Darwin Hendel  
Provost's Office  
University of Minnesota

July 5, 1990

UNIVERSITY OF MINNESOTA UNDERGRADUATE SURVEY:

TECHNICAL REPORT

Prepared by Chris Uting

Minnesota Center for Survey Research  
University of Minnesota  
2122 Riverside Avenue  
Minneapolis, Minnesota 55454-1320  
(612) 627-4282



## COMPLETION STATUS

A total of 3,607 surveys were mailed to University of Minnesota undergraduate students for this project. A total of 2,634 mailed questionnaires were completed and returned (Table 1). An additional 14 respondents refused to complete their surveys, 885 did not return their surveys, 50 respondents were eliminated from the initial sample because their mail was returned by the post office, and 24 were eliminated because they were not undergraduates. The overall response rate for this mail survey was 75 percent.

TABLE 1

### FINAL SAMPLE STATUS OF THE UNDERGRADUATE SURVEYS

	<u>Number</u>	<u>(%)</u>
Completions	2,634	73
Refusals	14	0
Surveys Not Returned	885	25
Eliminated		
Bad Addresses	50	1
Not an Undergraduate	24	1
	3,607	100%
*Response Rate	75 Percent	

-----  
 \*Response rate was calculated by the following formula:

$$\text{Response Rate} = \frac{\text{Completed Questionnaires}}{\text{Total Sent} - \text{Eliminated}}$$

### SAMPLING ERROR

The margin of error for a simple random sample of the size of the Undergraduate Survey may be as high as plus or minus two percent, depending upon the distribution of sample responses. This sampling error presumes the conventional 95 percent degree of desired confidence, which is equivalent to a "significance level" of .05. This means that if all students at the university were surveyed, the results would not differ from the Undergraduate Survey by more than two percentage points.

In addition to sampling error, the practical difficulties of conducting any public opinion survey may introduce other sources of error.

April 6, 1990

Dear Student,

To better understand the relationship between attending school and working at a paid job, the Provost's Office at the University of Minnesota has commissioned the Minnesota Center for Survey Research to gather information from university undergraduate students. We need you to fill out the enclosed questionnaire so that the information gathered will represent this group. Even if you have never had a paid job while attending the University of Minnesota, we would still like you to complete the questionnaire.

You are one of a small number of undergraduate students at the University of Minnesota being asked to provide information on this issue. Your name was selected in a random sample of students. In order that the results will truly represent the experiences of students at the University of Minnesota, it is important that each questionnaire be completed and returned.

You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so that we may check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire.

The results of this survey will be used to analyze and evaluate the undergraduate experience of university students. Your participation in this project is important to insure an appropriate representation of all undergraduates.

I would be happy to answer any questions you might have. Please write or call. The telephone number is 627-4282 between 9:00 and 4:30 p.m. Thank you for your assistance.

Sincerely,

William J. Craig  
Director

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Last week a questionnaire seeking information on the relationship between attending school and working at a paid job was mailed to you. You were selected in a random sample of University of Minnesota undergraduates.

If you have already completed and returned it to us, please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small, but representative sample of undergraduate students, it is extremely important that yours also be included in the study if the results are to accurately represent undergraduates at the University of Minnesota.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me at 627-4282 between 9:00 a.m. and 4:30 p.m. and I will get another one in the mail to you today.

William J. Craig, Director  
University of Minnesota  
Minnesota Center for Survey Research  
2122 Riverside Avenue, Mpls., MN 55454

May 3, 1990

Dear Student,

About three weeks ago I wrote to you seeking information about your experiences as an undergraduate student at the University of Minnesota. As of today we have not received your completed questionnaire.

The Provost's Office at the University of Minnesota asked the Minnesota Center for Survey Research to conduct this survey to better understand the relationship between attending school and working at a paid job.

I am writing to you again because of the significance each questionnaire has to the usefulness of this study. Your name was drawn through a scientific sampling process in which every student at the University of Minnesota had an equal chance of being selected. This means that only fifteen out of every one hundred students are being asked to complete this questionnaire. In order for this study to be truly representative of the undergraduate students at the University of Minnesota it is essential that each person in the sample return their questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed.

Your cooperation is greatly appreciated.

Sincerely,

William J. Craig  
Director

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## **Undergraduate Survey**

The week of April 9 an important survey will be sent out from the Provost's Office to a random sample of undergraduate students. Results from the survey will be used to analyze and evaluate the undergraduate experience at the U of M. If you receive a survey, please take the time to fill it out. Your cooperation is greatly appreciated.

### **Undergraduates**

An important survey from the Provost's Office about undergraduate experiences will go out the week of April 9 to a sample of undergraduate students. Your cooperation completing the survey will be greatly appreciated.

APPENDIX C

Description of Financial Aid Variables

606-610	STU ADJ GR INC	<u>Student's adjusted gross income:</u> This is the student's adjusted gross income from the most recent complete federal tax year.
611-617	PAR ADJ GR INC	<u>Parent's Adjusted Gross Income:</u> This is the parent's adjusted gross income from the most recent complete federal tax year.
618-622	TOT AID	<u>Total Aid:</u> Total aid offer the student the the period of enrollment during the academic year.
623-627	STU BDGT	<u>Student Budget:</u> The estimated expenses of the student for the period of enrollment during the academic year.
628-632	EXP FAM CONTRIB	<u>Expected Family Contribution:</u> The amount of financial assistance expected from the student's family.
633-637	GR NEED	<u>Gross Need:</u> The student's expected expenses (STU BDGT) minus the assistance expected from the student's family (EXP FAM CONTRIB).
638-642	UNMET NEEDN	<u>Unmet Need:</u> Financial need that remains after subtracting financial aid, from all sources, from the student's gross need (GR NEED).
643	AID PREF	<u>Aid Preference:</u> The student's preference for financial assistance in the form of loans or work after having received gift assistance (grants or scholarships). The student may indicate a preference for loans, work or both.

644	DEP STA FED	<p><u>Federal Dependency Status:</u> The federal dependency status of the applicant. The student may be considered 'dependent' or 'independent'. If a student is considered 'dependent', the parents financial resources are considered in calculating the expected family contribution. If a student is considered 'independent' only the student and spouses financial resources are considered.</p>
645-647	NULL EFC	<p><u>Null Expected Family Contribution:</u> Null values appear as zeros in AS. Thus, there is no way to distinguish between missing values and zeros. This field has been created to allow you to make such distinctions. The EXP FAM CONTRIB field is null when both the PAR ADJ GR INC and STU ADJ GR INC fields are null. This will be the case if the student received a scholarship but did not apply for federal and state financial aid.</p>
648-654	GRANT OFFER	<p><u>GRANT OFFER:</u> The amount of aid in the form of grants that was offered the student for the year.</p>
655-661	GRANT PAID	<p><u>GRANT PAID:</u> The amount of aid in the form of grants paid to the student during the year.</p>
662-669	LOAN OFFER	<p><u>LOAN OFFER:</u> The amount of aid in the form of loans that was offered the student for the year.</p>
670-677	LOAN PAID	<p><u>LOAN PAID:</u> The amount of aid in the form of loans paid to the student during the year.</p>

678-685	SCHOLARSHIP OFFER	<u>SCHOLARSHIP OFFER:</u> The amount of aid in the form of scholarships that was offered the student for the year.
686-692	SCHOLARSHIP PAID	<u>SCHOLARSHIP PAID:</u> The amount of aid in the form of scholarships paid to the student during the year.
693-699	TUITION WAIVER OFFER	<u>TUITION WAIVER OFFER:</u> The amount of aid in the form of tuition waivers that was offered the student for the year.
700-706	TUITION WAIVER PAID	<u>TUITION WAIVER PAID:</u> The amount of aid in the form of tuition waivers paid to the student during the year.
707-713	WORK OFFER	<u>WORK OFFER:</u> The amount of aid in the form of work that was offered the student for the year.
714-720	WORK PAID	<u>WORK PAID:</u> The amount of aid in the form of work paid to the student during the year.
721-727	V.A. OFFER	<u>VETERANS ADMINISTRATION BENEFITS OFFER:</u> The amount of aid in the form of V.A. benefits that was offered the student for the year.
728-734	V.A. PAID	<u>VETERANS ADMINISTRATION BENEFITS PAID:</u> The amount of aid in the form of V.A. benefits paid to the student during the year.