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ACADEMIC PERFORMANCE AND RETENTION
OF THE DISADVANTAGED STUDENT
WITH PART-TIME EMPLOYMENT - AN EXPLORATORY STUDY

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ACADEMIC PERFORMANCE AND RETENTION OF THE DISADVANTAGED STUDENT WITH PART-TIME EMPLOYMENT--AN EXPLORATORY STUDY

By

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ABSTRACT

ACADEMIC PERFORMANCE AND RETENTION OF THE DISADVANTAGED STUDENT WITH PART-TIME EMPLOYMENT--AN EXPLORATORY STUDY

By

H. Paul Roberts

The purpose of this study was to determine whether part-time employment had a detrimental effect on the academic performance of freshmen admitted to Michigan State University through the Developmental Program for Admissions. In order to be admitted through the Developmental Program for Admissions, a student must demonstrate academic potential in spite of social, educational, and economic background. The typical student in the Developmental Program for Admissions is from an inner-city area of Michigan.

Two specific criteria were measured to determine the effect of part-time employment on academic performance. First, the re-enrollment of the student for the following academic year was used to determine the retention rate of students who worked versus students who did not work. Second, the number of credits earned by the end of the freshman year by students who worked was compared with the number of credits earned by students who did not work.

Differences related to sex, racial/ethnic origin and curriculum of the student were also examined for their effect on the number of credits earned.

A supplementary study was conducted to determine the students' perception of their work experience. Each student was interviewed to determine his or her attitude toward part-time employment. Although tests of statistical significance were not performed on this data, it provided supplementary information on the work patterns of the students.

The study was initiated by sampling 170 students from a population which had been admitted through the Developmental Program for Admissions for the academic years of 1975-76 and 1976-77. A Chi-Square was employed to test the data relating to the retention of the student. There was no significant difference in the rate of retention between students who worked and students who did not work. An analysis of variance was used to test the relationship between part-time employment and number of credits earned. There was no significant difference in the number of credits earned between students who worked and students who did not work.

The supplementary study revealed that the students generally had a positive attitude toward the work experience. Most of them felt that part-time employment did

not interfere with their academic progress. The work was regarded by most students as a welcome change from the academic routine.

A few students obtained jobs requiring irregular or late evening work hours. These students expressed the opinion that this type of employment may have had a detrimental effect on their grades.

The study further revealed that students who were receiving Work-Study as a part of their financial aid were not working to the full limit of their work eligibility. The students worked an average of only eight hours per week. Future studies might be conducted to determine if upperclassmen are working a greater number of hours than freshmen. This type of study might also examine the reasons why students who are receiving financial aid are not working to the limit of their work eligibility.

The major conclusion of the study is that disadvantaged students can be expected to work a moderate number of hours with no detrimental effects on their academic performance. In this regard, they display the same effects of part-employment as the general student population.

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The author expresses his sincere appreciation to Dr. Marvin G. Rist, chairman, who encouraged and guided the conduct of this study. Without his interest and support, this project would have never reached its conclusion.

Special thanks should also go to Dr. Walter F. Johnson, co-chairman of the dissertation committee, and to other committee members, Dr. Margaret F. Lorimer and Dr. Walter W. Scott, for their direction and suggestions.

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CHAPTER I

INTRODUCTION

Financial assistance for students is becoming an important factor in higher education. If our nation is to benefit fully from the professional and vocational expertise which education can develop, then financial resources must be available to every qualified student who cannot afford postsecondary education. The decisions made by a financial aid office at a college or university may determine whether or not a student can eventually make a full contribution to society. These same decisions can also play a significant role in the ability of the institution to fulfill its role in society. The financial aid office has the primary responsibility to insure that sufficient resources are available to attract and retain the most promising students.

Several developments caused financial aid to become a complex function at most institutions. In 1958 the National Defense Student Loan Program became the first major federal program specifically created to assist students with need. The primary impetus for creating

the new loan program was to catch up with the Soviet achievements in space. The United States had been rudely awakened to the fact that another nation was surpassing it in technical expertise. The immediate response was to make financial resources available so that more students could attend post secondary institutions.

The concept of awarding financial aid based on need expanded rapidly with the passage of the Educational Amendments of 1968. A significant part of the amendments was the establishment of three major federal programs to assist needy students: The National Direct Student Loan (NDSL), the College Work-Study Program (CWSP), and the Supplemental Educational Opportunity Grant (SEOG). These three programs were joined by a fourth federal program in 1973, the Basic Educational Opportunity Grant (BEOG), to insure that all students could afford the spiraling costs of education.

The National Direct Student Loan, College Work-Study Program, and Supplemental Educational Opportunity Grant are referred to as the campus-based programs. Each institution applies to the federal government for these funds which are then distributed to needy students at the institution. The financial aid office determines in what manner these funds are to be awarded to financial aid applicants. On the other hand, the Basic Educational Opportunity Grant is awarded directly to each student by the Federal government. A student who qualifies for a

Basic Grant is given a student eligibility index which the student can use to receive an award at any approved institution. The Federal government then reimburses the institution for the amount of the student's award.

The institution usually develops award guidelines to optimize the distribution of the available resources. Many financial aid offices attempt to give a mixture of loan, employment and gift aid to each student so that all applicants are treated equitably. While most students would prefer to receive grants or scholarships because they represent no obligation for repayment, grants and scholarships seldom cover the full cost of education. Therefore, loans and work must also be used to meet the aggregate financial need of their students.

As a result of the reliance on loans to help finance education, many students have incurred large debt obligations. The most common types of loans are the National Direct Student Loan (formerly The National Defense Loan) and the Guaranteed Student Loan. The repayments on both of these loans can be deferred until after graduation. As a result, however, it has not been unusual for many aid recipients to owe $5,000 at the completion of a baccalaureate degree or $10,000 at the end of graduate school. The default rate on the repayment of these loans has been high, climbing to 17 percent in 1977.

There is concern that loans place too great a burden on students and that some other type of aid should be substituted. One alternative is part-time employment. Under the College Work-Study Program, an eligible student can be awarded a specified amount of money to be earned in a Work-Study job. The government will pay up to 80 percent of the student's salary to any approved nonprofit organization which employs the student.

The College Work-Study Program was originally created for the student with an exceptionally high financial need. However, a massive input of federal funds eventually permitted the program to be available to any financial aid applicant with need as defined by the institutional guidelines. Since a qualified employer can be reimbursed for as much as 80 percent of the employee's salary, a student who is eligible for assistance through the College Work-Study Program is virtually assured of a job. Consequently, a reasonable work opportunity has become a viable replacement for other types of aid such as grants, scholarships or loans. It was this flexibility in the use of funds that led to a change in the financial aid policy at Michigan State University in 1975.

Financial Aid Packaging Policy at Michigan State University

Financial assistance for students may come from many different sources. In addition to government

subsidized loans and grants, donor scholarships are often given to designated students by private organizations. Fellowships or scholarships based on academic excellence are often awarded by national foundations to the most outstanding students. Graduate assistantships and departmental scholarships are primarily controlled by academic departments as a means to recruit and retain students. The financial aid offices at most institutions award financial assistance based solely on financial need.

Most financial aid offices award financial assistance to students after all other sources of aid have been considered. Thus, if a student applying for financial aid receives a fellowship or scholarship from another source, the amount of that award is considered in determining the student's remaining financial need. Within the same institution, a department may offer an assistantship to a graduate student which reduces the need calculated by the financial aids office. All institutions which receive federal dollars to award to needy students must use a federally approved needs analysis system to determine the financial need of each applicant. The two most common needs analysis services accepted by most institutions are the College Scholarship Service (CSS) and the American College Testing Program (ACT).

At Michigan State University, the Financial Aid Administrative Group is the policy-making body which

governs need-based financial aid. However, it does not have the power to establish guidelines for financial aid which is not based on need. It cannot control the awarding of such aid as fellowships, academic scholarships, and graduate assistantships. Yet, all of these outside sources must be considered before a student's remaining financial need will be met.

The Financial Aid Administrative Group has always strived to develop an award philosophy which would maximize the use of available funds while providing fair and equitable treatment to the greatest number of students. In general, the objective has been to award grant money first, followed by a combination of loan and work and then followed by additional grant money to those students with very high need. At Michigan State University, the assistance offered to students comes from a combination of institutional and federal aid funds. A typical in-state dependent student would receive financial aid in the following order according to financial need:

A. Student Aid Grant - This grant is made available from the General Fund by the Michigan State University Board of Trustees. It will pay the lessor of one-half of the student's need or one-half of the student's tuition.

B. Self-Help

1. College Work Study Program or the student's own job. Money for the College Work-Study Program comes from the Federal government.
2. National Direct Student Loan. These funds are also furnished by the Federal government. Allowing for minor yearly fluctuations, the amount of work and loan has averaged about 25-30 percent of the financial aid award. While these percentages vary with the need of each student, it has been typical for the student with maximum financial need.

C. Michigan State University Grant - This aid is also provided from the General Fund by the Michigan State University Board of Trustees. It is used to pay for the second half of tuition if the student has sufficient financial need.

D. Supplemental Educational Opportunity Grant - These funds are also provided by the Federal government and are intended for students with the greatest financial need.

These guidelines vary depending upon the particular type of student applying for aid. For instance, the aid for which a student is eligible depends on whether the student is a graduate or undergraduate, an in-state or out-of-state resident, or dependent or independent. However,

regardless of the student's classification, the basic intention of the Financial Aid Administrative Group is to insure that all students are awarded a combination of aid which includes grants, loans and employment. The actual packaging guidelines for the 1976-77 academic year at Michigan State University are presented in Appendix A.

As the number of dollars available in the College Work-Study Program increased at Michigan State University, a decision was made in 1975 to include part-time employment as part of every financial aid award. Prior to this time, a financial aid recipient could have received a loan to replace the work portion of the award. By simply indicating a desire not to work while attending school, a student with high need could have received a $1,000 National Direct Student Loan to replace the work portion of the award. Thus, many financial aid recipients, in particular those with the greatest financial need, could have assumed $4,000-$5,000 in debts at the completion of four years of undergraduate academic work.

Under the new financial aid policy, a recipient would be awarded a combination of loan and work <u>without the option of replacing the work expectancy with a loan</u>. If a student had a $500 work expectancy but decided not to work, it became the student's responsibility to obtain the needed assistance from some other source. Also, if

the student had already secured a job without the assistance of Work-Study eligibility to assure employment, this was considered acceptable to fulfill the work requirement. But if the student was unable to find a job on his own, then a College Work-Study award would be offered.

The new policy accomplished several objectives. It reduced the ultimate loan obligation that the student had to repay. It also utilized more effectively the large amount of College Work-Study funds which Michigan State University received from the Federal government. In addition, it enabled the University to spread available resources over a larger proportion of the student body. Another direct benefit to the University was the fact that it provided a larger labor pool for the numerous departments and offices on campus. College Work-Study recipients now make an important manpower contribution to the operation of Michigan State University.

Background of the Problem and Need for Further Research

The positive benefits of this new policy made it appear to be a good decision by the Financial Aids Administrative Group. However, the decision was questioned by those who were concerned by the effect of part-time employment on the academic performance of the student. Many questions were asked about the potential impact of

part-time employment on academic progress. It was felt that although some students might benefit from work experience, others might be harmed.

In order to provide answers for some of these questions, the financial aid staff consulted the research that had been done of the subject. This investigation revealed that work was generally beneficial to students as long as it was done in moderate amounts. The studies seemed to fall into the following general categories:

1. Research conducted prior to the passage of the National Defense Student Loan Act (1958). The pioneer study in this area was done by H. B. Baker in 1941.[1] In his study entitled "The Working Student and His Grades," Baker was one of the first to find that work in moderate amounts had no discernible effects on grades. He concluded that mental efficiency was much more important than work load in affecting achievement. Dickerson and Newbegin did a similar study in 1959 at a large university and reached the same general conclusion as Baker.[2]

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[1]H. B. Baker, "The Working Student and His Grades," Journal of Educational Research 35 (1941):28-35; E. J. Brantley, "Study of Part-Time Student Employment," Journal of Higher Education 28 (1957):161-63; R. E. Silver, "The Effect of Self-Support upon Student Success in Walla Walla College," Dissertation Abstracts 16 (1956):1819-20.

[2]C. Dickerson and B. Newbegin, "Can Work and College Mix?" Personnel and Guidance Journal 38 (1959):314-17; D. L. Trueblood, "Effect of Employment on Academic Achievement," Personnel and Guidance Journal 36 (1957):112-15.

2. Studies undertaken since the emergence of the federal financial aid programs, particularly the College Work-Study Program.

Merritt (1970) compared the academic performance of College Work-Study students with that of more affluent students.[3] He defined "affluent students" as those who were living in fraternities and sororities. Despite this imprecise definition, Merritt's findings also supported earlier research. Fields and LeMay (1973) said that work productivity resulting from student employment, for both the employee and the employer, gave work programs an advantage over grant or loan programs. They correctly predicted that work opportunities as a type of financial aid would become increasingly important in the future. However, they suggested that further research was needed to determine if specific groups of students exhibited different reactions to work as opposed to loans.[4]

3. Research conducted to determine if entering freshmen should be counseled to work.

Kaiser and Bergen (1968) examined three categories of freshmen: those who worked and received financial aid,

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[3]Ray Merritt, "Academic Performance of Work-Study Students," Journal of College Student Personnel (May 1970): 173-76.

[4]C. R. Fields and M. L. LeMay, "Student Financial Aid: Effects on Educational Decisions and Academic Achievement," Journal of College Student Personnel (September 1973):425-29.

those who worked but were not on financial aid and those who neither worked nor were receiving financial aid. They could find no significant difference in the grade point average of the three groups.[5] J. B. Henry (1967) also found that work up to fifteen hours per week did not sacrifice academic achievement in freshmen.[6]

Statement of the Problem

The foregoing studies could not provide complete justification for the new policy of the Financial Aid Administrative Group at Michigan State University. None of these studies analyzed the effect of work on disadvantaged students. There had been other studies on the retention of minority or disadvantaged students but none of them dealt with part-time employment as an influencing factor. Most of the studies were similar to those done by Greenwood (1972) and Seabrooks (1974) in that they attempted to identify background characteristics of minority dropout students.[7]

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[5]Herbert E. Kaiser and Gerlad Bergen, "Shall College Freshmen Work?" Journal of College Student Personnel (November 1968):384-85.

[6]J. B. Henry, "Part-Time Employment and Academic Performance of Freshmen," Journal of College Student Personnel 8 (1967):257-60.

[7]C. H. Greenwood, "Characteristics of Black Freshmen Dropouts at Ball State University" (Doctoral dissertation, Indiana University, 1972); G. C. Seabrooks, "Factors Related to Admission, Low Achievement, and Early

At Michigan State University, there is a large identifiable population of disadvantaged students admitted through the Developmental Program for Admissions. The Office of Supportive Services, which provides counseling and tutorial services for disadvantaged students, questioned the advisability of the new work policy as it affected these students. It was pointed out that the students admitted through the Developmental Program for Admissions faced many more obstacles than the average students to completing their education. Since they did not have an adequate academic preparation for college, they had to spend additional time and effort in acquiring necessary educational skills. It was hypothesized that the extra burden of part-time employment would decrease their chances for academic success. And since most of these students were on financial aid, they would be heavily impacted by the work policy. It was a valid concern but unfortunately there was no available research on which to base a decision.

Purpose of the Study

This study was undertaken to provide specific information concerning the effect of part-time employment on the academic performance of students admitted through

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Attrition of the Disadvantaged Student at the University of Notre Dame" (Doctoral dissertation, Catholic University of America, 1974).

the Developmental Program for Admissions. The research will attempt to determine whether the same relationship exists between work and academic performance of these students as for the general student population or whether they should be regarded as a special group in awarding financial aid.

The major purpose of this study is to determine whether part-time employment has a detrimental effect on the academic success of freshmen in the Developmental Program for Admissions at Michigan State University. If it is determined from this study that the freshmen who work are experiencing a higher dropout rate or earning fewer academic credits than the freshmen who do not work, then the mandatory work policy of the Financial Aid Administrative Group may have to be reconsidered. On the other hand, if no relationship exists between the two factors, then the policy will have added support for its continuance.

Hypotheses

This study involves the testing of two major hypotheses. The first one states that part-time employment has no effect on the retention of freshmen students in the Developmental Program for Admissions at Michigan State University. For the purposes of the study, retention is defined as the enrollment of the student for the fall term of the succeeding academic year. Part-time campus

employment is defined as working a minimum average of one hour per day or five hours per week for the entire year.

The second hypothesis states that the number of hours spent in the part-time campus employment has no effect on the number of credits earned by the student. Credits earned will be distinguished from credits for which the student has enrolled according to grade reports from the Office of the Registrar.

Exploratory Questions

An additional objective of the study will be to collect supplementary data on the work patterns of students in the Developmental Program for Admissions. Some students, for example, may work extensively during the first term, drop out of the work force entirely for the second term, but re-enter the working group on a sporadic basis for the third term. Other students will spread their work more evenly throughout the year by maintaining a regular work pattern. Although tests of statistical significance will not be performed on these data, it may provide additional insight into the work patterns of students in the Developmental Program for Admissions.

In an additional attempt to supplement the quantitative data, various students will be contacted individually in order to discuss their attitudes toward

campus employment. Some of the specific questions addressed to the students will be:

1. Why did you work while attending school during your freshman year?
2. What type of work did you do?
3. Was this work experience related to your major?
4. Do you regard the work experience as good or bad?
5. Did you continue a part-time job after your freshman year?
6. Do you feel that work helped or hindered your academic success?

The complete questionnaire is presented in Appendix B.

Definition of Terms

Financial aid, as in many other types of work, has terms which are used that are unique to that field. The following definitions will help clarify some of the terms related to financial aid and to the other subjects involved with this study:

College Work-Study Program.--A federally funded program which provides a work opportunity for every eligible student. An institution applies for and receives Work-Study funds from the Federal government which it uses to provide employment opportunities for students. An individual student receives a specified amount of

Work-Study eligibility. Of this amount, up to 80 percent of the student's salary may be paid by the Work-Study funds. For example, a student with $1,000 Work-Study eligibility receives $800 of the salary from the Federal government and only $200 from the specific employer. Thus, the student is very attractive as a job candidate and virtually assured of job placement.

Developmental Program for Admissions.--A program at Michigan State University designed to admit disadvantaged students who might not otherwise have an opportunity for a university education. The typical student in the Developmental Program for Admissions is from an inner-city area in Michigan but has displayed academic potential in spite of social, economic and educational background.

Financial Aid Package.--In the jargon of financial aid, a "package" refers to the combination of aid that a student receives to attend school. This combination may be made up of loans, grants, scholarships, and work. The term "financial aid award" is often used synonomously.

Self-Help.--The portion of a student's financial aid package at Michigan State University that is composed of loans and work. It is contrasted to grants or scholarships which require neither work nor repayment at a later date.

Total Need Student.--A recipient of financial aid who, because of family economic condition, does not have any personal resources with which to pay for schooling. This student will receive the maximum amount of aid based on the institutional guidelines.

Limitations of the Study

1. The study includes students enrolled during two years of the past decade in which the Developmental Program for Admissions has been in existence at Michigan State University. However, it was felt that the freshmen admitted during the 1975-76 and 1976-77 academic years are the groups that provide the most accurate representation of students affected by the mandatory work policy of the Financial Aids Administrative Group. Prior to 1975, students who worked while receiving financial assistance may have had different motivations to work from students who chose loans in place of work.

2. This study does not include off-campus employment for two reasons: (1) the great majority of freshman students obtain on-campus employment, particularly if it is available through the College Work-Study Program, and (2) data on off-campus employment would be highly unreliable and impossible to verify.

3. Fluctuations may occur in the enrollment and work patterns of some students. Although many students

schedule their work hours evenly throughout the term, some work extensively during a short time span or switch jobs several times throughout the year. However, these work patterns will be identified in order to associate each student with a particular pattern.

Overview

The problem, the purpose of the study, the general hypotheses, the supporting research, exploratory questions, definition of terms and limitations of the study have been presented in Chapter I. A review of the literature pertaining to the Developmental Program for Admissions, financial aids and work and academic performance will comprise Chapter II. In Chapter III a report of the research design is given through a presentation which describes the methodology, the hypotheses, the analysis procedures and the supplementary information. The analysis of the statistical results and a discussion of the exploratory questions will be presented in Chapter IV. A summary of the study and the conclusions drawn along with the implications for the future research will be discussed in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

The Developmental Program for Admissions at Michigan State University

Michigan State University's creation of a special program for the disadvantaged student began in 1963. Although the original program, called Project Ethyl, enjoyed some success, it was not until 1967 that the Detroit Project Admissions Program made a more systematic approach to the recruiting and the admission of disadvantaged students. The program began to take on broader dimensions by recruiting nonminority as well as minority students from the inner city areas of Michigan. In 1971, the project was renamed the Developmental Program for Admissions.[1] The Office of Supportive Services was also established to provide counseling and tutorial service for these students.

Dr. Lloyd Cofer, who headed the Detroit Project, states that the goal of supportive services is to improve

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[1]James B. Hamilton, Report on Special Programs (East Lansing: Michigan State University, Fall 1973), p. 1.

the academic skills of disadvantaged students so they can effectively participate in the academic community. "Students coming into our program are still poorly prepared academically," says Dr. Cofer. . . . "Since these students have had academic difficulties in the past, giving them the opportunity to come here is important, but giving them all the support programs possible while they are here and requiring that they adhere to regular University standards are essential."[2]

In order to be considered for admission through the Developmental Program for Admissions, the student must have pursued a college preparatory program in high school. It is felt that a student must have sufficient subject matter background before the academic support services can help. Special consideration for admission is also given to a number of nonacademic circumstances that may have affected the student's high school performance. Such things as the economic background of the family, breaks in the family structure which may have caused strain, or student illnesses are viewed as extenuating circumstances to be considered in determining the student's chances for success.[3]

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[2]Bulletin (East Lansing: Office of Special Programs, Michigan State University), Vol. 1, No. 1, p. 2.

[3]Ibid., p. 6.

It is natural that the Office of Supportive Services is concerned about removing additional obstacles for these students. The background from which most of the students come is totally different from the environment at Michigan State University. These students, by virtue of their backgrounds, may have many more adjustment problems than the typical college freshman. Many of them have never had the experience of holding a part-time job. Consequently, they are not used to meeting schedules or exercising the self-discipline needed to effectively allocate their time.

Thus, the question of the advisability of part-time employment for these students is a valid one. Would the work expectancy as part of their financial aid be another obstacle to the completion of a college program? Was it realistic to think that the work experience could prove beneficial and increase their chances for a successful academic career? The literature was searched for suggestions for gaining answers to these questions.

Prior Research on Work and Academic Achievement

The research that has been done on the relationship between work and academic achievement has focused primarily on the total student body. However, in an earlier study entitled "Academic Performance of Work Study Students," Ray Merritt (1969) attempted to compare

students from lower socioeconomic levels by using the Work-Study Program as a criterion for socioeconomic status.[4] At the time of the study, the College Work-Study Program was open only to qualified students from low income families. The College Work-Study Program was created under the Economic Opportunity Act of 1964 and it attempted to provide part-time employment (not to exceed fifteen hours per week) for students from culturally and economically deprived backgrounds. By linking eligibility to family income, an effort was made to restrict it to the targeted population.

Merritt's purpose was to compare the grade point averages of students employed on the Work-Study Program with the GPAs of students who were members of social fraternities or sororities (referred to as Greeks). He interpreted the membership in a Greek organization as identifying a student from the higher socioeconomic group.[5]

The individuals selected for Merritt's sample were full-time students with an American College Test (ACT) score available and who had completed the fall semester of 1968-69 at Delta State College. In addition to these

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[4]Ray Merritt, "Academic Performance of Work-Study Students," Journal of College Student Personnel (May 1970):173-76.

[5]Ibid., p. 173.

general criteria, the Work-Study students must have earned $50 or more during the semester while Greeks must have earned less than $50 during the semester.[6]

Merritt's sample consisted of 143 Greeks and 204 Work-Study students. To determine whether any differences existed between these groups, tests of significance were used between the composite ACT score of each group and between the first semester GPA of each group. Members of the Greek organizations had a significantly higher mean ACT score than did the Work-Study students. However, when the GPAs of each group were compared, no significant difference was found. Merritt also compared the groups according to college major but could find no significant difference according to this variable.[7]

Based on the results of his study, Merritt concluded that the academic performance of the Work-Study students was equal to that of the other students. He suggested that:

> . . . the Work-Study student may be a special kind of person. Although he comes from the lower socio-economic levels, he seems to be a person who has committed himself to securing a college education, thereby meeting his needs for necessities. And he offsets personal disadvantages caused by his socio-economic level by working hard to attain his goals and commitments.[8]

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[6]Ibid.

[7]Ibid., p. 174.

[8]Ibid., p. 176.

Merritt made a liberal interpretation from his data by concluding that the Work-Study student was a "special kind of person." Not only did he conclude that the work had no effect on academic achievement, he concluded that students with lower academic potential worked harder to attain equivalent academic success.

Two main problems seem apparent in the design of the Merritt study. First, it should not have been assumed that all Work-Study students were from culturally or economically deprived areas. Many Work-Study students may have come from families with low incomes, but not necessarily culturally deprived or educationally disadvantaged. It is often the case that Work-Study recipients come from families living on Social Security as the result of the death or retirement of the primary working parent. The fact is that the Work-Study group is not necessarily as homogeneous as Merritt would conclude.

Secondly, it seems unwarranted to conclude that Work-Study students have some special motivation to succeed in the face of adversity. That is, Merritt should have stopped at his conclusion that part-time employment had no discernible effect on academic success. To go beyond this conclusion was not justified in light of the data collected.

Hay and Lindsay (1968) conducted a study on work and academic achievement at about the same time as the

Merritt study. Their research project was motivated by the impact of work on academic performance.[9] The passage of the Economic Opportunity Act of 1964 promised that work would become a more important means of financing college education for many students. However, Hay and Lindsay did not limit their sample of working students to those on Work-Study. Instead, they were more interested on the effects of work on the general student body. They wanted to find answers to some general questions. Can males work with less harm to their grade point averages than females? What is the number of hours that a student can work at a part-time job and not have his grades affected? They also controlled for scholastic aptitude in attempting to get answers to their questions.[10]

Four variables were used for comparison purposes. They were (a) major, (b) academic term standing, (c) sex, and (d) employment status (whether or not they were employed the prior term). The criterion variable was the GPA achieved by the student the prior term. Scholastic Aptitude Test (SAT) scores were used to equate students on academic ability.[11]

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[9]John E. Hay and Carl A. Lindsay, "The Working Student: How Does He Achieve?" Journal of College Student Personnel (March 1969):109-14.

[10]Ibid., p. 109.

[11]Ibid., p. 110.

Unfortunately, Hay and Lindsay did not have a central university file from which to collect employment data. They consequently obtained employment data at registration by asking the students: (a) if they were employed the last term, (b) if yes, what was the hourly rate, and (c) how many hours per week did they work on the average?

The school which Hay and Lindsay used in their study was the Ogontz Campus of the Pennsylvania State University. Since Ogontz Campus offered both an associate degree and a baccalaureate degree, the study also controlled for these two types of students. However, results concerning differences in these two samples were inconclusive.[12]

Using an analysis of variance, none of the comparisons for demographic differences proved significant ($p < .05$). The mean aptitude scores and achieved GPAs were practically identical for employed and nonemployed students. However, for the number of hours worked, the data revealed an interesting trend. Students who worked a lesser number of hours per week achieved a higher grade point average than those who worked more than fifteen hours per week. The figure of fifteen hours was used since Work-Study students were permitted to work only up to this maximum under the Economic Opportunity Act of

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[12]Ibid., p. 111.

1964. The results, although not significant, showed differences in mean GPA from .11 to .58 of a letter grade in favor of students working a lesser number of hours per week. Hay and Lindsay interpreted this trend as being valuable for the college counselor in advising students about part-time employment.[13]

In 1967 Bergen and Kaiser also conducted a study on part-time employment but directed their examination at the college freshmen. Their sample included first-term freshmen who worked a modest number of hours per week (ten to fifteen) between October and January. All subjects in this test group were freshmen who received at least $200 in financial assistance through grants, scholarships, or loans.[14]

Kaiser and Bergen used two other groups as comparisons with the employed students. The first group also received financial assistance but did not choose to work. The second group neither worked nor received any aid.[15] It must be recognized that this study was done at the time that financial aid and the College Work-Study Program were coming into existence. Thus, there was no

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[13]Ibid., p. 113.

[14]Herbert E. Kaiser and Gerald Bergen, "Shall College Freshmen Work?" Journal of College Student Personnel (November 1968):384-85.

[15]Ibid., p. 385.

recognition in the study that those receiving aid were from any particular socioeconomic group or that work was an expected part of the student's aid.

The first semester grade point averages were compared and the t-test for matched pairs was applied at the .05 level of significance. No differences in the grade point averages were found between any of the groups. Kaiser and Bergen subsequently concluded that although the investigation did not prove the traditional value of work, neither did it indicate that part-time employment showed adverse effects.[16]

Barnes and Keene (1974) conducted a study at Southern Illinois University in which they used the entire population of freshmen students to examine the effect of part-time employment. They compared the first term grade point average of financially needy students who worked with the grade point averages of financially needy students who did not work. Furthermore, they divided the population into subgroups according to academic ability as measured by the Illinois State Scholarship Commission.[17]

Since they studied the entire population of freshmen, Barnes and Keene did not perform tests of statistical

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[16]Ibid.

[17]John D. Barnes and Roland Keene, "A Comparison of the Initial Academic Achievement of Freshmen Award Winners Who Work and Those Who Do Not Work," Journal of Student Financial Aid (November 1974):25-29.

significance on the data. By analyzing only first-term grade point averages, they concluded that part-time employment in an on-campus job did not interfere with the initial academic adjustment of students at Southern Illinois University. However, they defined part-time employment as a minimum of only $50 per term in earnings which was an average of only two hours of work per week. The authors suggested that any future studies should be expanded to identify broader and more long-range effects of employment. They felt that the subsequent academic progress and retention of the student warranted further examination.[18]

Gaston conducted a study at Western Washington State College in 1972 in which she attempted to assess the effect of "required" work on the student. The author was attempting to assess the impact of Work-Study awards on financial aid recipients.[19] Because the College was attempting to limit the amounts of National Direct Student Loans which the students had to borrow, the study was an attempt to determine if Work-Study was a viable alternative form of assistance.

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[18]Ibid., p. 29.

[19]Margaret Gaston, "A Study of the Effects of College Imposed Work-Study Programs on Grade Point Averages of Selected Students at Western Washington State College," Journal of Student Financial Aid (March 1973):19-26.

Gaston measured the change in grade point average over the entire academic year for students in junior class status. The assumption was made that students who had attained junior class status had a common background of general education requirements, thereby restricting the variable of different basic classes and/or grading practices. A chi-square was performed on the data. The tests indicated that there was no appreciable difference in the records of the two groups during the year. Based on the results, Gaston concluded that the Work-Study requirement for financial aid recipients was a viable alternative to loans.[20]

Most of the measurements of academic success have been limited to the variable of grade point average. However, one of the foremost researchers in the area of retention, Alexander W. Astin, expanded his measurements to include retention as well as grade point average and reported conflicting results in his own research. In 1972, Astin conducted a study on college dropouts for the American Council on Education in which he reported the following:

> . . . students at both two-year and four-year colleges had less chance of staying in college if they were employed during the school year. . . . The most obvious explanation of the relationship is that

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[20]Ibid., p. 25.

> students who work during the school year have less time to devote to studies and therefore drop out because of poor grades, a possibility that has practical implications for a national policy regarding Work-Study Programs.[21]

A few years later, in 1975, Astin directed a study which produced the exact opposite conclusions. He stated that the analysis of expected and actual dropout rates indicated that participation in Work-Study Programs during the freshman year resulted in a small but significant increase in student persistence. He suggested that participation in Work-Study at any time during the undergraduate years was associated with somewhat larger reductions in dropout rates. The reductions were 8 percent for men and 11 percent for women.[22]

Astin further defined his populations by race. He reported some notable differences between black and white students. For blacks, most of whom were employed in federal College Work-Study Program, the positive impact seemed even greater than for whites. Participation for white students was associated with a 4 percent reduction in dropout possibilities, whereas participation for black students was associated with a 13 percent reduction.[23]

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[21]Alexander W. Astin, College Dropouts: A National Profile (American Council on Education, 1972), p. 37.

[22]Alexander W. Astin, Preventing Students from Dropping Out (San Francisco: Jossey-Bass, 1975), p. 62.

[23]Ibid., p. 75.

Astin suggested that several factors may have accounted for the positive effects of on-campus employment. One of these factors is economic in that students who have jobs are more financially secure. Another factor is psychological. Regular employment on campus provides the student an opportunity to spend more time interacting with faculty and staff. Greater involvement in campus life may also help to develop a stronger sense of identification with the institution.[24]

Discussion of Previous Research

A primary deficiency in all of these studies is that the criterion used to evaluate the effect of work on academic achievement was one-dimensional. With the exception of Astin's study, the grade point average was used almost exclusively as the determinant of success. While grade point average is an important indicator of academic success, it does not give a complete picture of the student's progress. This study includes two other measurements for the effect of work. The number of credits earned and the student's re-enrollment for the succeeding academic year are used in place of grade point average.

Grade point average can be affected significantly by many factors which are not measurable. This study did not attempt to identify instances of students enrolling

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[24]Ibid., p. 76.

in less challenging courses or classes taught by professors with liberal grading policies. This study also did not take into consideration the possibility that some academic majors have lower overall grade point averages than others. Finally, this study regarded grade point average as an imprecise measure of the student's probability of remaining in school. A student with a high grade point average may drop out of school if there is no strong identification with the institution. For these reasons, this study utilized the criteria of credits earned and re-enrollment for the second academic year as measurements for academic success.

The previously mentioned studies individually included some aspect of this study, yet none of them fully addressed the questions which prompted this study. Merritt assumed that all Work-Study students formed a homogeneous group. He viewed them as all from culturally as well as economically deprived backgrounds even though this was not always true.[25] While Kaiser and Bergen sampled only students who received financial aid, they did not determine whether the work was a necessary part of the student's award. The decision concerning employment may have been optional on the part of the student. In addition, they sampled only a three-month work span

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[25]Merritt, "Academic Performance of Work-Study Students," p. 173.

for each student. This short time span was hardly sufficient to assess any longer term effects of employment.[26] Barnes and Keene established a minimum of only $50 per term to qualify a student as a student employee.[27] Depending on the wage rate, a student could have worked as little as an hour and a half per week to gain this classification. A student earning $3 per hour would need to work only two-thirds as much as a student earning $2 per hour to earn the same amount of money. This study measures hours worked as opposed to money earned to compensate for this variation.

Therefore, this study attempts to fill a void left by prior research. It will examine the effect of part-time employment on the disadvantaged student. It will also use two alternative measurements of academic progress. Although data will be collected on grade point average, credits earned and re-enrollment for the second year will be the criteria used in the major hypotheses to measure academic performance.

Summary

The previous studies individually examined some aspect of this study, yet none of them focused on the

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[26]Kaiser and Bergen, "Shall College Freshmen Work?," p. 384.

[27]Barnes and Keene, "A Comparison of the Initial Academic Achievement of Freshmen Award Winners Who Work and Those Who Do Not Work," p. 27.

effect of employment on the academic progress of the disadvantaged student. Merritt compared Work-Study students to students living in fraternities and sororities.[28] Kaiser and Bergen sampled students on financial aid who worked with those who did not work.[29] Barnes and Keene conducted a one-term study of freshmen who worked as little as two hours per week.[30] Hay and Lindsay conducted a study of working students with a primary objective of identifying demographic characteristics of this group.[31] Gaston examined the effect of an expected work requirement on the academic performance of Work-Study students.[32] Finally, Astin conducted two separate

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[28]Merritt, "Academic Performance of Work-Study Students," pp. 173-76.

[29]Kaiser and Bergen, "Shall College Freshmen Work?," pp. 384-85.

[30]Barnes and Keene, "A Comparison of the Initial Academic Achievement of Freshmen Award Winners Who Work and Those Who Do Not Work," pp. 25-29.

[31]Hay and Lindsay, "The Working Student: How Does He Achieve?," pp. 109-14.

[32]Gaston, "A Study of the Effects of College Imposed Work-Study Programs on Grade Point Averages of Selected Students at Western Washington State College," pp. 19-26.

studies on college dropouts in an attempt to identify variables which may be significant in reducing the drop-out rate.[33]

The previous studies generally used grade point average as the determinant of academic progress. This study will utilize credits earned and retention in school as the criteria to measure academic performance. Also, instead of examining the general student population, this study will focus on the relationship between work and academic success for the disadvantaged college student.

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[33]Astin, College Dropouts: A National Profile and Preventing Students from Dropping Out.

CHAPTER III

DESIGN OF THE STUDY

The design of this study is described under five main headings: (1) Sample Selection, (2) Sources and Nature of the Data, (3) Testable Hypotheses, (4) Analysis Procedures, and (5) Exploratory Questions.

Sample Selection

The sample was selected from a population which had been admitted to Michigan State University through the Developmental Program for Admissions for the academic years of 1975-76 and 1976-77. Of the 540 students in the population, 170 students were included in this study. The subjects were selected randomly from lists supplied by the Office of Supportive Services.

Sources and Nature of the Data

Records maintained by the Office of Financial Aids at Michigan State University provided the data pertaining to campus employment. Grade point averages, credits earned, enrollment curriculum, and sex were obtained from reports prepared by the Office of the Registrar. The names of students in the Developmental

Program for Admissions and their ethnic origin were provided by the Office of Supportive Services.

The number of hours worked was collected on a term-by-term basis. The total number of dollars earned through the last pay period of the term was divided by the hourly pay rate to compute the number of hours worked. Figures for the three terms were then summed to obtain a total number of hours worked for the academic year. The number of credits earned was also collected for each individual term and computed for the entire year. The fact that a student may not have earned credits even though enrolled was also considered. Therefore, it was decided to indicate whether the student was enrolled for each individual term. It was originally intended to collect data on each student according to academic major but not enough students fell into each category to make a meaningful basis for comparison. Therefore, the category was broadened to identify enrollment by curriculum and college in order that a sufficient number of students would be represented in each group. The form used to collect the data is presented in Appendix C.

Testable Hypotheses

The testable hypotheses were stated in the null form since it was hypothesized that no significant difference existed among the groups with respect to various

characteristics. Therefore, a rejection of the null hypothesis would lead to the conclusion that the groups would differ significantly with respect to the characteristic under consideration.

There were two major hypotheses tested in the study:

Hypothesis 1:

> There is no relationship between the retention rate of students admitted through the Developmental Program for Admissions and their participation in part-time campus employment.

For the purpose of this study, retention was defined as the re-enrollment of the student at Michigan State University for the fall term of the subsequent academic year. Part-time campus employment was defined as averaging no less than five hours of work per week for the thirty-week academic year. The study used a Chi-square test at the .05 level of significance with sex, racial/ethnic origin, and curriculum of the student used as controlling variables.

Hypothesis 2:

> The number of hours spent in part-time campus employment by freshmen in the Developmental Program for Admissions at Michigan State University makes no difference in the mean number of credits earned by these students.

This hypothesis was used to test the relationship between a continuous dependent variable, mean number of

credits, and a categorical independent variable, number of hours employed. Therefore, an analysis of variance was used to test the hypothesis at the .05 level of significance.

In order to control for the differences related to sex, racial/ethnic origin and curriculum of the student, the following minor hypotheses were first tested separately using an analysis of variance to isolate their effect on the variables in the major hypothesis:

h1:

The sex of students admitted through the Developmental Program for Admissions makes no difference in the mean number of credits earned.

h2:

The racial/ethnic origin of students admitted through the Developmental Program for Admissions makes no difference in the mean number of credits earned.

h3:

The curriculum of students admitted through the Developmental Program for Admissions makes no difference in the mean number of credits earned.

Analysis Procedures

Chi-square and an analysis of variance were the statistical procedures employed in the treatment of the data. The Statistical Package for the Social Sciences (SPSS) was used to perform the computational work.

The first step in the analysis procedure was to collect information on each student according to the following variables:

(1) Sex

(2) Ethnic origin

(3) Curriculum

(4) Credits earned

(5) Grade point average

(6) Enrollment

(7) Type of work (Work-Study or regular employment)

(8) Work pattern

Data on credits earned and number of hours worked were collected on a term-by-term basis and as a cumulative figure at the end of the first academic year. The campus employment of the student was identified as either regular campus employment or employment through the College Work-Study Program. The racial/ethnic origin of the student was designated as either minority or nonminority. Although most of the minority students admitted through the Developmental Program for Admissions are Afro-American, there are a few minority students of Hispanic, native American, or Asian ethnic origin.

The work pattern was divided into the following eight categories:

(1) Worked fall, winter, spring

(2) Worked fall, winter

(3) Worked fall, spring

(4) Worked winter, spring

(5) Worked fall only

(6) Worked winter only

(7) Worked spring only

(8) Did not work

In order to be classified as a worker during a term, a student had to average no less than five hours of work per week for the entire term. For example, a student who averaged five hours of work per week for fall or winter term, but only averaged two hours of work per week for spring term, was regarded as a worker for only fall and winter terms.

The second step in the analysis procedure was to select a level of statistical significance for the testing of the two major hypotheses. The .05 level of significance was chosen. The .05 level is widely used because it means that a significant result could occur by chance only five times in one hundred trials. Prior to selecting this level, consideration was given to the two types of errors which can occur when a hypothesis is tested. Type I errors are set at the desired level which the researcher desires to risk the possibility of rejecting a true hypothesis. Type II errors involve the failure to reject assumptions when they are actually false. Since the probabilities of Type I and Type II errors are inversely related, it is impossible to minimize the

risks of both types of errors simultaneously. Therefore, the significant level selected should reflect the researcher's evaluation of the consequence for each type of error. Since a Type II error would mean that any effect of work would go undetected, it would represent a serious error in evaluating the impact of the policy. Thus, it was decided to use the .05 level since it minimized the chance of committing a Type II error.

Analysis of Exploratory Questions

The exploratory questions were used primarily to collect information that could not be obtained from the statistical data. For example, there may be many different reasons why a student engages in part-time employment. Some students work because they need the earnings to finance their education. Other students work for a variety of personal reasons. The statistical data cannot adequately reflect these differences. Similarly, the data cannot completely reflect the impact of work on the student. It cannot provide insight into the student's perception of the work experience, and neither can it suggest which types of work may be more compatible with an academic schedule. Therefore in order to gather this supplementary information, all available students were interviewed and asked to respond to the following seven questions:

1. Why did you work while attending Michigan State University during your freshman year?
2. What type of work did you do?
3. Was your part-time employment related to your major?
4. Did you find the work a good or a bad experience?
5. Do you feel that your work helped or hindered your academic performance?
6. If you did not need the money, would you still have worked while attending school?
7. Did you continue to work after your freshman year?

The original sample was comprised of eighty-three students who undertook any amount of part-time employment. Fifty-nine percent of this group was still enrolled at Michigan State University in the fall of 1978. The students were contacted individually to solicit their responses to the above questions.

Summary

The sample was comprised of 170 students who were admitted to Michigan State University through the Developmental Program for Admissions in either 1975 or 1976. Information was collected on the independent variables of sex, ethnic origin, and curriculum of each student.

It was also gathered on the dependent variables of grade point average, credits earned, and retention. Minor hypotheses were first tested using an analysis of variance to determine the effect of sex, racial/ethnic origin, and curriculum on the number of credits earned. A Chi-Square test at the .05 level of significance was used to test the first hypothesis concerning the relationship between part-time employment and retention. An analysis of variance was used at the .05 level of significance to test the relationship between the number of hours worked and the number of credits earned. In addition, individual students were contacted to obtain additional information to aid in the interpretation of the data.

CHAPTER IV

ANALYSIS OF THE RESULTS

This chapter will include the statistical findings of the study along with the analyses and discussions of these findings. Results are presented in the same order in which the hypotheses were presented in Chapter I. Thus, the Chi-Square results are presented first. The analysis of variance results are presented next. Finally, the findings from the personal interviews with members of the selected subsample are presented.

Sample Description

The sample was composed of 170 students in the Developmental Program for Admissions. Of this number, eleven students were excluded from the statistical analyses because they had interrupted patterns of enrollment. They either failed to enroll for one of the three terms of the freshman year, or they withdrew from school before the completion of a particular term. In either case, it was felt that the interrupted enrollment pattern would bias the measurement of credits earned and retention.

Of the 159 students included in the statistical analysis, 82 were first enrolled for the fall term of 1975 and 77 were first enrolled for the fall term of 1976. There were 102 females and 57 males. Table 4.1 presents the racial/ethnic distribution of the students in the sample.

TABLE 4.1.--Racial/Ethnic Distribution of Sample of Students in the Developmental Program for Admissions

Racial/Ethnic Origin	Number	Percentage
White	13	8.2
Black	141	88.7
Hispanic	2	1.3
Other	3	1.8
Total	159	100.0

The enrollment preference for the students in the sample is presented in Table 4.2 according to college of enrollment. The original intention was to present these data based on the college major of each student. However, this proved to be too fine a distinction for a meaningful comparison since several majors had only one student enrolled.

A student working on campus could either have been employed through the College Work-Study Program or regular campus employment. Table 4.3 shows how many students were employed in each type of employment and how many were not

TABLE 4.2.--College of Enrollment of Students in the Developmental Program for Admissions

College	Number	Percentage
Social Science	29	18.2
Natural Science	27	17.0
Business	24	15.1
University College (no preference)	22	13.8
Engineering	15	9.4
Arts and Letters	10	6.3
Education	7	4.4
Communication	6	3.8
Human Ecology	5	3.1
Residential College	9	5.6
Agriculture	3	1.9
Veterinary Medicine	2	1.3
Total	159	100.0

TABLE 4.3.--Employment Categories of Students in the Developmental Program for Admissions

Employment Category	Number	Percentage
College Work-Study Program	68	42.8
Non work-study student employment	15	9.4
No employment	76	47.8
Total	159	100.0

employed. Of those students who held on-campus employment, 68 out of 83 (81.9%) were employed through the College Work-Study Program.

Table 4.4 presents the number of students who worked an average of five or more hours per week for one, two, or three terms.

TABLE 4.4.--Work Patterns for Employed Students in the Developmental Program for Admissions

Work Pattern	Number	Percentage
Worked three terms	32	42.1
Worked two terms	21	27.6
Worked one term	23	30.3
Total	76	100.0

The averages of the total sample for the dependent variables of credits earned, grade point average, and re-enrollment for the second academic year are presented in Table 4.5. The data for credits earned and grade point average are presented as a cumulative average at the end of the first academic year.

TABLE 4.5.--Average Number of Credits Earned, Grade Point Average, and Percentage Re-enrolling for the Second Year for the Total Sample

Average Number of Credits Earned	32.89
Average Grade Point Average	2.05
Percentage Re-enrolling for Second Year	79.9%

It should be noted that these averages are lower than for the general student population. The averages of the same variables for the total freshman population at Michigan State University are presented in Table 4.6. These differences were expected due to the prior academic background of the students admitted through the Developmental Program for Admissions. However, the importance of these figures is not in the average for the total sample of students in the Development Program for Admissions but in how the workers compare with the nonworkers on these same measurements. These comparisons are presented in the discussion of the major hypotheses.

TABLE 4.6.--Average Number of Credits Earned, Grade Point Average, and Percentage Re-enrolling for the Second Year for the Total Freshman Population

Average Number of Credits Earned	42.52
Average Grade Point Average	2.63
Percentage Re-enrolling for Second Year	82.30%

SOURCES: Office of the Registrar; Term End Report, Office of the Registrar, Michigan State University, Fall 1976; Margaret F. Lorimer, "The Persistence, Performance, and Major Preference of Students Who Entered Michigan State University as Freshmen, Fall Terms, 1970 to 1976 by High School Grade Point Average," Status Report (Michigan State University: Office of Institutional Research, Fall 1977, August 1978).

Hypothesis 1

It is stated in Hypothesis 1 that no relationship exists between the retention of students admitted through the Developmental Program for Admissions and their

participation in part-time campus employment. Retention is defined as the re-enrollment of the student for the fall term of the second academic year. The summary relative to the testing of this hypothesis is presented in Table 4.7. Since the .05 level of significance was preselected as the criterion for rejecting the hypothesis, the significance level of .4788 means that the null hypothesis was not rejected.

TABLE 4.7.--Chi Square Analysis for Testing the Relationship between Retention and Part-time Campus Employment

	Did Not Work	Worked 0.1-2.5 hrs Per Week	Worked 2.6-5.0 hrs Per Week	Worked 5.0+ hours Per Week
Returned (N=127)				
Number	62	13	16	36
Percentage	80.5%	68.4%	88.9%	80.0%
Did Not Return (N=32)				
Number	15	6	2	9
Percentage	19.5%	31.6%	11.1%	20.0%

Chi square = 2.4807 with 3 degrees of freedom; Significance = .4788.

Hypothesis 2

It is stated in Hypothesis 2 that the number of hours spent in part-time campus employment makes no difference in the mean number of credits earned. Since the hypothesis was used to test the relationship between a continuous dependent variable and a categorical independent

variable, an analysis of variance was employed. The summary relative to the testing of this hypothesis is presented in Table 4.8.

TABLE 4.8.--Analysis of Variance Summary for Testing the Difference in Credits Earned between Workers and Nonworkers

Source	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	13.787	3	4.596
Within Groups	8319.396	155	53.674
Totals	8333.182	158	

F = .086; Significance = .968

Any significance greater than .05 would indicate that no relationship exists between the variables of part-time employment and the number of credits earned. Thus, the null hypothesis is not rejected. The difference between the means of the various groups for the number of credits earned is presented in Table 4.9. The data are presented as cumulative figures at the end of the year.

Minor Hypotheses

Hypothesis h1

Three minor hypotheses were tested to account for differences which may be related to sex, racial/ethnic origin, and curriculum of the student. The summary relative to the testing of Hypothesis h1 is presented in Table 4.10. It is stated in this hypothesis that the sex of the student makes no difference on the mean number of credits earned.

TABLE 4.9.--Comparison of Average Number of Credits Earned with Number of Hours Worked

Group	Number of Students	Average Number of Credits Earned
Did not work	77	32.71
Worked .1-2.5 hours/week	19	32.52
Worked 2.6-5.0 hours/week	18	32.94
Worked 5.0 or more hours/week	45	33.33

Grand Mean = 32.89

TABLE 4.10.--Analysis of Variance for Testing the Relationship between Sex and the Mean Number of Credits Earned

Source	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	102.07	1	102.07
Within Groups	8231.10	157	52.42
Total	8333.18	158	

F = 1.98; Significance = .165

Since the level of significance for rejecting the null hypothesis was set at .05, the null hypothesis was not rejected.

Hypothesis h2

It is stated in Hypothesis h2 that there is no difference in the mean number of credits earned by students according to racial/ethnic origin. The summary relative to the testing of this hypothesis is presented in Table 4.11.

TABLE 4.11.--Analysis of Variance for Testing the Relationship between Racial/Ethnic Origin and the Mean Number of Credits Earned

Source	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	129.98	1	129.98
Within Groups	8203.20	157	52.25
Total	8333.18	158	

F = 2.49; Significance = .1168

Since the .05 level of significance was established for testing this hypothesis, the null hypothesis was not rejected. Data for means and standard deviations of the test groups are presented in Table 4.12.

It should be noted that the racial ethnic origin of the student was designated as either minority or non-minority. This was done because the sample contained a disproportionate number of students in each cell when

categorized according to precise racial/ethnic origin. There were 141 Black, 2 Hispanic, 2 American Indian, 1 Oriental, and 13 White students in the sample. Since an analysis of variance should not be performed with less than 10 students in each cell, the racial/ethnic origin was identified as either minority or nonminority.

TABLE 4.12.--Mean and Standard Deviation for Average Credits Earned Based on Racial/Ethnic Origin of the Student

Racial/Ethnic Origin	Number of Students	Mean Number of Credits Earned	Standard Deviation	Sum of Squares
Minority	146	32.62	7.37	4763.00
Nonminority	13	35.92	5.17	467.00
Total	159	32.89	7.26	5230.00

Hypothesis h3

It is stated in Hypothesis h3 that the curriculum of the student makes no difference in the mean number of credits earned. The summary relative to the testing of this hypothesis is presented in Table 4.13.

Since the .05 level of significance was established for testing this hypothesis, the null hypothesis was not rejected. It should be noted that the enrolled curriculum for each student was categorized into one of five different groups. The curriculum of each student was designated as either University College (no preference), Science, Humanities, Social Science, or Business. This was done

in order that ten or more students would comprise each cell for the analysis of variance. Data for means and standard deviations for the test group are presented in Table 4.14.

Interview Results

A selected subsample of twenty-five of the eighty-three workers in the sample was taken in order to ask specific questions about the students' work experience. Since this was a nonprobability sample, the respondents were selected on the basis of availability.

The purpose of the interviews was to gather information regarding the type of work, the reasons for working, and the student's reaction to the work experience. Each student was asked seven questions regarding the work experience and was encouraged to give any additional information which he/she felt was important. The conclusions apply only to the selected subsample and may not be representative of the entire group. However, the findings are of interest for the type of work which the interviewed students found most enjoyable and beneficial. They are also of interest for the student's own perception of the effect of employment on academic progress. In addition, the findings may have value for counseling students on the most desirable types of part-time employment which they should seek.

TABLE 4.13.--Analysis of Variance for Testing the Relationship between Curriculum and the Mean Number of Credits Earned

Source	Sum of Squares	Degrees of Freedom	Mean Square
Between Groups	335.74	4	93.93
Within Groups	7997.44	154	
Total	8333.18	158	

F = 1.6163; Significance = .1729

TABLE 4.14.--Mean and Standard Deviation for Credits Earned Based on the Curriculum of the Student

Curriculum	Number of Students	Mean Number of Credits Earned	Standard Deviation	Sum of Squares
University College (no preference)	22	34.05	6.79	970.95
Science	73	31.37	7.46	4011.01
Humanities	31	34.83	7.60	1736.19
Social Science	19	33.63	6.97	876.42
Business	14	33.71	5.56	402.86
Total	159	32.89	7.26	8333.18

Discussions of Interview Results

The interview respondents generally had a positive attitude toward the work experience. Only one student expressed concern about the experience, feeling that it hurt academic performance and should not be a mandatory part of financial aid. Ironically, this student has continued working since the freshman year and enjoys the experience very much. The responses to the questions fell into the following general categories: (A) Reasons for Work, (B) Type of Employment, and (C) Student Perception of the Work Experience.

Reasons for Work

Most of the students worked because they needed the money. Only five of the twenty-five students indicated that they worked for the satisfaction of part-time employment. Of those five, three were on the College Work Study Program. Of those who worked because they needed the money, one-third stressed that the financial aid policy had made it necessary to work. Surprisingly, when later asked if they would have worked while in school, even if they had not needed the money, fifteen of the twenty-five students indicated that they would have worked. Most found employment to be a break from the academic schedule and thought that it broadened their interests. Many of these students secured more interesting jobs after their freshman year. Those who were

employed as tutors, resident assistants, and library aides had a very positive attitude toward their experience.

Type of Employment

Eight students were employed in the dormitory cafeterias, four by the Physical Plant, five in the University library, four in various academic departments throughout campus, and four in miscellaneous jobs. Most students who were employed in the cafeterias had a neutral reaction to the work experience. To most of them, it was merely a way to earn extra spending money. Several of the students who worked in the library have continued their employment there. They indicated that the work was enjoyable and the flexible hours made it convenient for them to schedule work hours around their classes. Predictably, the most positive reaction to the part-time employment came from students who found jobs related to their majors. Several students worked as tutors, one as a referee in the intramural athletic programs, and a few others found employment within their academic departments. These students were enthusiastic about their part-time employment and generally retained their jobs in subsequent academic years.

The most interesting response to the work experience came from the students who obtained jobs with the Physical Plant at Michigan State University. Most of these jobs were custodial in nature and often required

the student to work late in the evening or early in the morning. Without exception, the students who worked these hours felt that the employment had an adverse effect on their academic performance. Most of the students had to work after 5:00 P.M. and felt that these hours interfered with their prime study time. A few of the students even had to work the 10:00 P.M. to 2:00 A.M. shift. Most of the students with this type of employment obtained jobs elsewhere after their freshman year in order to shift their work time to the daytime hours. One student has remained in a night custodial job for several years, even though he felt that it affected his grades. The student has kept the same job because the pay rate is better than in many other part-time jobs.

Student Perception of the Work Experience

The overwhelming response from the students was that they enjoyed the part-time employment. Sixteen students liked the experience, two students disliked it, and seven students had no opinion either way. Positive responses were offered regardless of whether the student thought the work had affected grades, whether the work was related to the student's major, or whether the work was done only to obtain extra money. Almost all of the students said that they would recommend part-time employment to other students, although a few thought that

students should not work until they have completed at least one term of school. Those who had this opinion felt that the first term should be reserved for becoming adjusted to the academic environment.

It should be noted that every student who was interviewed was cooperative in answering the questions. Most were eager to expand on their answers and to provide information which was not directly elicited by the questions. The interviewer was left with three general impressions as a result of the students' responses. The students generally enjoyed the work experience. The most beneficial jobs were perceived as those in which the student could use skills related to personal interests. Those jobs which required late evening work hours generally were to be avoided. Part-time employment schedules should be restricted to daytime hours.

Summary

Results of this study were presented and analyzed to determine whether a relationship exists between part-time employment and academic performance. The criteria for academic performance that were measured were number of credits earned and the re-enrollment of the student for the second academic year. The differences were not significant for either of these variables. In addition, selected students were interviewed to elicit their personal reactions to the employment experience. The students

generally enjoyed the part-time employment with the exception of those students who were employed during the late evening hours. This group of students generally felt that the employment had a negative effect on their academic performance.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Part-time employment has become an important way for many students to help finance their education. It has also provided the financial aid offices an additional type of aid to assist financially needy students. The creation of the College Work-Study Program in 1968 provided an important alternative to the loan and grant programs which were available. It helped to distribute a limited supply of resources over a greater proportion of the student body.

Both the institution and the students have derived benefits from expanding the employment opportunities. From the students' standpoint, loan obligations have been held to a smaller amount. Some students have gained work experience which has been beneficial to later career plans. From the institution's perspective, additional employment opportunities have permitted a greater number of students to receive financial aid.

However, part-time employment may also reduce the time that a student can devote to study. Prior research had shown that part-time employment in moderate amounts generally had no effect on academic performance. But most of this research had been done on the general student population. None of it had focused on the disadvantaged student as a participant in part-time employment.

At Michigan State University, there is a large population of disadvantaged students admitted through the Developmental Program for Admissions. In 1975, the Financial Aid Administrative Group adopted a new work policy which had a significant impact on these disadvantaged students. The new policy required that all financial aid recipients with sufficient need would receive part-time employment as a portion of their financial aid package. This work expectancy would not be replaced by other forms of financial assistance. Thus, a financial aid recipient who did not work would theoretically lack the necessary funds to pay for schooling costs. Since most of the students admitted through the Developmental Program for Admissions were also financial aid recipients, the new policy had a significant impact on this group of students.

The purpose of this study was to analyze the relationship between part-time employment and the academic performance of freshmen admitted through the Developmental Program for Admissions. Academic performance was measured

according to the number of credits earned and re-enrollment at Michigan State University for the second academic year. The academic performance of the freshmen students in the Developmental Program for Admissions who worked was compared to that of students enrolled in the same program who did not work. A worker was defined as a student who was employed at least five hours per week for the entire academic year.

In addition, an exploratory study was done to determine how selected students reacted to the work experience. Each student in the sample was asked if the work experience was worthwhile, if the student worked after the freshman year, the type of employment that was obtained, the reason for working, and the perceived effect of the work on academic performance. This information was intended to supplement the statistical data collected in the study.

Findings

The study was initiated by selecting a random sample of 170 students from the 1975-76 and 1976-77 freshman classes of students enrolled through the Developmental Program for Admissions. This sample represented approximately one-third of the total population. Information was collected on such demographic variables as sex, racial/ethnic origin, and enrolled curriculum. Data were collected on both an individual term basis

and on an academic year basis for the dependent variable of credits earned. Retention was also used as a dependent variable to measure academic performance. Retention was defined as the re-enrollment of the student for the fall term of the second academic year. The mean averages of the different variables for students who worked versus students who did not work were compared for equality. The study employed a Chi-Square and analysis of variance to test the major hypotheses.

No differences were found in the retention rate of students who worked versus students who did not work. Of the working students, 80.5 percent returned to Michigan State University for the second academic year versus 80.0 percent of the nonworking students. Nonworkers in this case represented those students who either did not work at all or who worked less than five hours per week.

Data collected on the average number of credits earned also failed to indicate a relationship between working and academic performance. The average number of credits earned for students who worked was 33.33 credits per year compared to 32.71 credits for students who did not work. The level of significance obtained in testing the hypothesis was .968. Thus, neither of the dependent variables for academic performance showed a significant difference between students who worked and those who did not work.

Part of the reason for these results may be attributed to the low average number of hours worked by the employed students. Only seven students averaged more than ten hours of work per week, the highest average being 13.37 per hours per week. For those students who worked more than five hours per week, the average number of hours worked was only 8.04 hours per week. Considering that the prior studies done on the relationship between work and academic performance defined up to 15 working hours per week as a moderate amount of employment, the average number of hours worked by the students in the Developmental Program for Admissions was rather low.

It should also be noted that the average level of academic performance for students in the Developmental Program for Admissions was considerably different from that of the general student population. Whereas the cumulative grade point average for all freshmen during the 1975-76 and 1976-77 academic years was approximately 2.60 on a 4.00 scale, the cumulative grade point average for the sample studied was only 2.05. Likewise, the number of credits earned by the average freshman at Michigan State University was approximately forty-three credits compared to approximately thirty-three credits for the students in this study.

The interviews with students who worked provided additional information regarding the students' reaction

to the work experience. The respondents expressed general satisfaction with part-time employment and most continued working after the freshman year. Some students remained in the same job for several years. Others secured positions requiring greater skills or with more responsibilities. Several students obtained positions as resident assistants in the dormitories. A few students were able to obtain employment that was related to their majors.

A significant finding from the interviews involved the students who held jobs with irregular working hours. These jobs usually involved custodial work or were similar positions which required employment after 5 P.M. All students who undertook this type of employment felt that the experience had an adverse effect on grades. They generally found it difficult to study during the day and expressed concern that the evening hours could not be devoted to studying. In contrast, no students with daytime employment hours felt that the work experience had a negative impact on academic performance.

Conclusions

The analysis of the data indicated that academic performance of students in the Developmental Program for Admissions was not affected by part-time employment. This result is consistent with other studies which have been conducted on the general student population. However, because the sample in this study included only students

who worked a low-to-moderate number of hours, the conclusions may not apply to students who work a greater number of hours.

Consistent with these findings, it can be concluded that the work expectancy is justified as a part of the financial aid packaging policy at Michigan State University. The earnings from part-time employment have helped to reduce the loans which students have to eventually repay. At the same time, the students had to work an average of only eight hours per week to fulfill the work expectancy.

The interviews with working students revealed that the students had a positive attitude toward the employment experience. Most of them felt that part-time employment did not interfere with their academic progress. The work was regarded by most students as a welcome change from the academic routine. In addition, they were aware that employment earnings were helping to reduce their ultimate loan obligation.

Finally, it can be concluded that some kinds of employment may not be advisable for many students. Jobs which require irregular or late evening hours seem to make it difficult to accommodate both working and studying. If possible, part-time employment for freshmen admitted through the Developmental Program for Admissions should be confined to the daytime hours.

Implications for Further Research

By focusing on the disadvantaged student population, this study provided information which was not previously available. While this new information will be valuable for future research, it was difficult to make comparisons with past studies. For example, this study determined that the average number of hours worked was quite low for students in the Developmental Program for Admissions. Therefore, there was no opportunity to analyze the effect of larger work amounts on academic performance. There may be some hourly level, perhaps ten or twelve hours of work per week, after which work becomes detrimental to academic performance of the disadvantaged student. Future studies in this area should attempt to sample disadvantaged students with larger work commitments in an effort to obtain this information.

There is a second dimension of part-time employment that needs further attention. This concerns the time of day that the student is employed in relation to the success of the work experience. This study suggested an employment problem with the disadvantaged students who worked during the evening hours. Several students indicated that the late working hours had a detrimental effect on their academic performance. Although there were no statistical data to support this conclusion, it is important to acknowledge that the students perceived this work schedule negatively. This finding can have a practical

application at Michigan State University. The Student Placement Office should be advised to recommend daytime employment opportunities for freshmen in the Developmental Program for Admissions. Likewise, the Office of Supportive Services and the Office of Admissions and Scholarships should be advised to counsel new students on the problems of working during the evening hours. In general, those employment opportunities which involve a higher degree of self-discipline should be recommended for upperclassmen who have had a greater opportunity to assess their own capabilities.

There is also a third area involving the employment of the disadvantaged student that needs additional research. Very few of the students earned the maximum amount permitted in the financial aid award. The discrepancy in expected versus actual earnings brings up an important subject. If the needs analysis were accurate, how did the student obtain the additional funds needed to pay for schooling? Some disadvantaged students may have elected to live on a more stringent budget than the typical student. Other disadvantaged students may have resorted to borrowing from unknown sources to make up the difference between work earnings and work expectancy. If this happened, then the disadvantaged students were not fairly served by the work policy.

However, a work expectancy may also be viewed as providing an additional option for financial aid recipients. It is widely accepted that the awarding of financial aid is an inexact process. The needs analysis cannot be completely accurate for every applicant. The uniform budget for educational expenses is not applicable to every student's situation. Thus, the existence of a work option may make it possible for a student to make a more rational assessment of his or her own financial need. If a student requires additional money, then he or she may work to the limit of the work eligibility. If a student's financial need is met with a lesser amount of earnings. then the student may work fewer hours. In this way, a work expectancy may help compensate for the inaccuracy of the financial need assessment.

The work expectancy also has allowed the financial aid office to assist a greater number of students. Unlike loans or grants, the amount of Work-Study awarded greatly exceeds the Work-Study funds available. Almost all grant money that is awarded is accepted by the students. But only half of the awarded Work-Study eligibility has been historically utilized by financial aid recipients. By including work as a part of every financial aid award, the financial aid office has helped to insure that students who truly need the assistance have the opportunity to help themselves. The entire subject of a precise

needs analysis is one which should have much greater attention and additional research.

In retrospect, this study may have provided more valuable information by extending the sampled time span over several academic years instead of being limited to the freshman year. Although some additional information about later work experience was obtained through the interviews, no statistical data on upperclass employment was collected. One of the primary benefits of collecting this information would have been to assess different patterns of employment. An upperclass sample might have contained more students who were employed at least ten hours per week. These students might also have been working to the limit of their financial aid work eligibility and had higher earnings than the freshmen students. A study which includes all academic classes of students from the Developmental Program for Admissions might indicate a wider variation in both employment and academic data.

Although this study did not address all of the questions regarding work and academic performance, it did provide much needed information on the part-time employment of freshmen in the Developmental Program for Admissions at Michigan State University. It is reassuring to know that the academic performance of these students was not adversely affected by part-time employment. However, the fact that the workers averaged only eight hours of

employment per week may help explain the negligible difference between the two groups.

Regardless of the statistical results, it was gratifying to receive the positive response of most students to the employment experience. Although we may conclude from this study that there were no negative effects of employment, we cannot ignore the financial benefits of the work experience. Without the employment opportunities, many of the students in the Developmental Program for Admissions would have been unable to finance their education. The resources offered as financial aid are limited and employment seems destined to play an ever-increasing role in helping to meet financial need. The students seem to accept this situation and approach the work expectation as a necessary part of their college experience.

APPENDICES

APPENDIX A

FINANCIAL AID PACKAGING GUIDELINES

MICHIGAN STATE UNIVERSITY

FALL 1976

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FINANCIAL AID PACKAGING GUIDELINES

MICHIGAN STATE UNIVERSITY

FALL 1976

The packaging guidelines below are used to determine the financial aid which each student will receive. The types of assistance available depend on whether the student is dependent or independent, in-state or out-of-state, graduate or undergraduate, and single or married. Since each financial aid applicant is considered on an individual basis, the guidelines attempt to consider the particular circumstances of each student.

Financial aid from Michigan State University is awarded after all other sources of assistance have been considered. Thus, sources of assistance such as expected parental contribution, summer savings, assets and outside aid are subtracted from the student's original financial need.

I. Dependent Students

A. Dependent, instate, single

1. Student Aid Grant--one-half of need or one-half of tuition, whichever is less

2. Self-help--a minimum of $1220. Combination of Work-Study/campus job at a minimum of $750 and National Direct Student Loan at a maximum of $480
3. Michigan State University Grant--up to $430, undergraduates only
4. Supplemental Educational Opportunity Grant--to a maximum of $990, undergraduates only
5. If remaining need and eligibility exist, additional National Direct Student Loan (maximum of $1500 for undergraduates, $2500 for graduates) or Work-Study may be awarded. Guaranteed Student Loan may be recommended when appropriate funding from other sources is not available.

B. Dependent, outstate, single

1. Self-help--a minimum of $1220. Combination of Work-Study/campus job at a minimum of $750 and National Direct Student Loan at a maximum of $480.
2. Supplemental Educational Opportunity Grant--to a maximum of $990, undergraduates only
3. If remaining need and eligibility exist, additional National Direct Student Loan (maximum of $1500 for undergraduates, $2500 for graduates) or Work-Study may be awarded. Guaranteed Student Loan may be recommended when appropriate funding from other sources is not available.

II. Independent students

A. Single, independent, instate

1. In-school imputed work, $250 per term minimum; more if work history indicates. The Guaranteed Student Loan cannot replace the minimum work expectancy.
2. Student Aid Grant--one-half of need or one-half of tuition, whichever is less
3. G.I. Benefits
4. Self-help--a minimum of $1960 minus imputed work and Guaranteed Student Loan. If a negative figure, self-help would be considered fulfilled.
5. Michigan State University Grant--up to $430, undergraduates only
6. Supplemental Educational Opportunity Grant--to a maximum of $300, undergraduates only

7. If remaining need and eligibility exist, Work-Study or National Direct Student Loan (maximum of $1500 for undergraduates, $2500 for graduate students) may be increased.

B. Single, independent, out-of-state

1. In-school imputed work, $250 per term minimum; more if work history indicates. The Guaranteed Student Loan cannot replace the minimum work expectancy.
2. Self-help--a minimum of $1960 minus imputed work and Guaranteed Student Loan. National Direct Student Loan (maximum of $1500 for undergraduates, $2500 for graduate students).
3. Supplemental Educational Opportunity Grant--to a maximum of $300, undergraduates only
4. If remaining need and eligibility exist, Work Study or National Direct Student Loan may be increased.

APPENDIX B

EMPLOYMENT QUESTIONNAIRE

APPENDIX B

EMPLOYMENT QUESTIONNAIRE

1. Why did you work while attending Michigan State University during your freshman year? _____

_____

2. What type of work did you do? _____

_____

3. Was your part-time employment related to your major? _____ Yes _____ No

4. Did you find the work a good or a bad experience? _____ Yes _____ No Please explain_____

_____

5. Do you feel that your work helped or hindered your academic performance? _____

_____

6. If you did not need the money, would you still have worked while attending school? _____ Yes _____ No

7. Did you continue to work after your freshman year? _____ Yes _____ No If yes, what type of job?

_____

APPENDIX C

DATA COLLECTION FORM

APPENDIX C

DATA COLLECTION FORM

Name

Last	First

Student Number

Sex

M=1
F=2

Entry Date

Term	Year

F=1
W=2
S=3

Ethnic Origin

White-1
Black-2
Chicano-3
Hispanic-4

Major

College Curriculum

Type Work

C-work study
N-non w/s

	Fall	Winter	Spring	Cumulative Average or Enrollment
Hours Worked				
Credits Earned				
Grade Point Average				
Enrollment Status 1 = Yes 2 = No				

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