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THE UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

AN ANALYSIS OF THE UTILIZATION OF STUDENT
FINANCIAL AID FUNDS AT INSTITUTIONS OF
HIGHER EDUCATION IN THE SOUTHWEST

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
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BY
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Norman, Oklahoma
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AN ANALYSIS OF THE UTILIZATION OF STUDENT
FINANCIAL AID FUNDS AT INSTITUTIONS OF
HIGHER EDUCATION IN THE SOUTHWEST

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CHAPTER I

INTRODUCTION

Statement of Problem

One of the significant results of the passage of the Higher Education Amendments of 1965 was the decision of the U.S. Office of Education to regionalize the administration of the Federal Student Financial Aid Programs.¹ Limited staff had been assigned to the Regional Office as a result of the passage of the National Defense Education Act of 1958.² However, with the enactment of the Higher Education Amendments of 1965, the U.S. Office of Education was administering a total of four major Federal Student Financial Aid Programs.

From the inception of the student financial aid program, a policy of decentralization of certain aspects of the program to the Regional Offices has been followed. The underlying principle has been that contact between the educational institution and the Office of Education would be more effective, more personal, more frequent, and more economical at the regional level.³

¹ Staff of the Division, "A History of the Division of Student Financial Aid" (for the Lyndon B. Johnson Presidential Library, unpublished document, Summer of 1968), p. 18.

² Ibid., p. 11.

³ Ibid.

Student financial aid program officers with their supporting staffs are the people who on a day-to-day basis carry out the work of the Office of Education at the Regional Office level. A major responsibility of the Regional Program Officer is to provide assistance and consultative services to colleges and universities concerning the development of the various college-based programs of financial aid for students in higher education.⁴ These programs include the National Direct Student Loan Program (NDSLPL), the Educational Opportunity Grant Program (EOGP), and the College Work-Study Program (CWSP). Once an institution is participating in one or more of these programs, it becomes the responsibility of the Regional Office Program Officer to conduct periodical evaluation of the programs in operation and to assist the institution in identifying and resolving problems to ensure an efficient and effective administration of the programs.

The evaluation or program review is conducted on campus by one or more of the student financial aid program officers. The review includes a determination if proper records are being kept and if the student financial aid programs are being administered according to federal guidelines. At the conclusion of a program review, it is a general practice for the program officer to report his findings to an assembled group of institutional administrative officers, including the president. It has been this writer's experience that during this reporting session the following question is raised: "How do we compare with

⁴Position Description for a Student Financial Aid Program Officer, OE Form 52, p. 2.

other institutions of similar size?" Despite the amount of student financial aid information and data the Office of Education requires of participating institutions, few attempts have been made to assemble the information in a workable manner. Similarly, no detailed analysis has been attempted which would provide the program officer with data to answer accurately and constructively, inquiries like the above-raised question.

Purpose

In order to provide useful data to assist program officers in their work with colleges and universities in the States of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas, the purpose of this study was to ascertain what relationships that size, type, and control may exert on the amount of utilization of student financial aid funds at institutions of higher education in the Southwest and to develop a student financial aid utilization model.

Hypotheses

- I. There will be no significant difference between the average amount of assistance per aid applicant at publicly-controlled and privately-controlled institutions.
- II. There will be no significant difference between the average amount of assistance per aid applicant at universities and four-year colleges.
- III. There will be no significant difference between the average amount of assistance per aid applicant at universities and two-year colleges.

- IV. There will be no significant difference between the average amount of assistance per aid applicant at four-year and two-year colleges.

Definition of Terms

For the purpose of this study the following definitions have been formulated:

Control of Institution: As per OE Form 1036 - Public, Private.

Enrollment: Actual number of students enrolled at a given institution during the 1972-73 academic year.

Federal Fiscal Year: Federal Fiscal Year begins July 1 of one calendar year and ends June 30 of the following calendar year.

Institution of Postsecondary Education: All universities, four-year colleges and two-year colleges in the Southwest, both public and private, that participated in one or more of the federal student financial aid programs during Fiscal Year 1973.

Kinds of Student Financial Aid:

1. National Direct Student Loan (NDSL) - A loan program for undergraduate and graduate students who are attending a participating postsecondary institution on at least a half-time basis. Borrower must demonstrate financial need to receive a NDSL. NDSL funds are provided on a 90 percent federal/10 percent institutional matching basis.
2. College Work-Study (CWSP) - A part-time employment program for undergraduate and graduate students who are attending a participating postsecondary institution on at least a half-time

basis. Students must demonstrate financial need to be eligible for the CWSP. CWSP funds are provided on an 80 percent federal/20 percent institutional matching basis.

3. Education Opportunity Grant (EOG) - A grant program for full-time undergraduate students who are attending a participating postsecondary institution. Students must demonstrate exceptional financial need to be eligible for an EOG. EOG funds are 100 percent federal dollars.

4. Guaranteed Student Loan/Federally Insured Student Loan (GSL/FISL) - A loan program for undergraduate and graduate students who are attending an eligible college or university, a school of nursing, or a vocational, technical, trade, business, or home-study school. Funds for this program are borrowed directly from a bank, credit union, savings and loan association or another participating lender. These loans are guaranteed by a state or private, non-profit agency or are insured by the federal government.

5. Institutional Student Employment (ISE) - A part-time employment program for undergraduate and graduate students who are attending a postsecondary institution. The institution provides 100 percent of the funding. Students may or may not have to demonstrate financial need to be eligible for these funds.

6. Institutional Grants and Scholarships (IGS) - Nonfederal resources of student financial aid other than loans and work. Institutional grants and scholarships may include waiver of tuition and/or fees, and scholarships of all types controlled

by the institution. Students may or may not have to demonstrate financial need to be eligible for these funds.

OE Form 1036: Institutional Application for Participation in Federal Student Financial Aid Programs. Institutions wishing to participate in the NDSLIP, EOGP, and CWSP are required to complete this form annually for funding.

OE Form 1152: Annual Fiscal Operations Report. Institutions complete this form annually reporting actual expenditures during the previous fiscal year.

Size of Institution: Actual number of student financial aid applicants who enrolled at participating institutions during Fiscal Year 1973.

Southwest: The States of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas, which comprise Federal Office of Education Region VI. The Regional Office is located in Dallas, Texas.

Type of Institution: As per OE Form 1036 - University, Four-year College or Two-Year College.

Related Studies

Although the concept of student assistance is not new to American higher education, the role of the federal government in student financial aid is comparatively new.⁵

Studies dealing with the direct support of the federal government in student financial aid programs can be covered by the general

⁵George Nash, "Student Financial Aid, College and University" Encyclopedia of Educational Research, 2nd Ed.; (1960), p. 1340.

topic, "Administration of Student Financial Aid." Studies related to the general topic would include the student financial aid officer, the development of Student Financial Aid Administration as a profession, and the effectiveness of a specific program. Studies dealing with each of these areas will be reviewed below. The reader should note that several of the studies discussed will include more than one of the specific areas of the general topic.⁶

The first major study of the Administration of Student Financial Aid was conducted by Nash for the College Entrance Examination Board. A questionnaire was sent to 1,094 accredited undergraduate institutions of postsecondary education. His study was primarily concerned with the role of the financial aid administrator, the administrative organization of the financial aid office, and the intrainstitutional relationships the financial aid officer may experience.⁷

In general, Nash found his respondents to be well educated, mature administrators who are reasonably well satisfied with the nature of their work. Puryear repeated Nash's survey questionnaire in some 340 two-year colleges and obtained generally similar results. The two-year aid administrator was slightly older than his four-year counterpart but tended to have a smaller supporting staff. One understandable difference lay in the fact that senior college aid officers are much more likely to

⁶The studies referenced by Footnotes 5,7, and 8 are examples of studies which include more than one of the related topics.

⁷George Nash and P. E. Lazarsfeld, New Administrator on Campus: A Study of the Director of Student Financial Aid (New York: Bureau of Applied Social Research, Columbia University, 1967) p. 7.

have graduated from their college of employment than are those in junior colleges.⁸

A later study was conducted by the Western Committee for Higher Education Surveys and the College Entrance Examination Board. The survey was concerned with the present level of professional development of financial aid officers, their training needs and their attitudes concerning future development of the profession. The study was based upon responses of aid directors representing 122 institutions in the Western United States. The results of the study showed the annual turnover of financial aid officers to be lower than previous studies indicated, and that most of the moderate to large aid programs were being administered by a full-time aid officer. Most respondents indicated that instructional workshops were the favored method of maintaining professional competence and that continuing student financial aid training was desirable. Steps recommended for further developing the aid profession included a code of ethical standards, state and regional meetings, and a journal devoted to financial aid.⁹

Casazza approached the Administration of Student Financial Aid subject by conducting a study of the career patterns of student financial aid officers. The study was concerned with the educational back-

⁸James B. Puryear, "A Descriptive Study of Certain Characteristics of Financial Aid Services and Officers in Junior Colleges" (unpublished dissertation, Florida State University College of Education, 1969) p. 63.

⁹Warren W. Willingham, Professional Development of Financial Aid Officers, (Palo Alto, California: College Entrance Examination Board, 1970), p. 1.

ground of practicing financial aid directors, their work experience prior to becoming financial aid directors, their relative positions within their institutions as financial aid directors, and their expectations and aspirations for their professional futures.¹⁰ A questionnaire was sent to the directors of financial aid at the 179 institutions that had enrollments of over 10,000 students in the fall of 1969.

In general, Casazza found that, based on their duties and their positions within the administrative structure of their respective institutions, financial aid directors are middle-level administrators in higher education. He also reported that most aid directors become directors by chance and have little or no formal training. The study also indicated that the financial aid directors viewed their positions as life-long careers, although they considered work as a financial aid director to be good preparation for other administrative positions in higher education. The younger aid directors aspired to advance to top administrative positions rather than to remain in financial aid until retirement.¹¹

In 1971, the Bureau of Applied Social Research, under contract with the U.S. Office of Education, published a status report of the Educational Opportunity Grant Program. Questionnaires were sent to 1,939 institutions participating in the EOG Program. The major conclusion of the study was that the EOG Program was achieving its primary objective

¹⁰ Clarence Louis Casazza, "Career Patterns of Financial Aid Directors" (unpublished dissertation, Indiana University School of Education, 1970), p. 23.

¹¹ Ibid., pp. 214-217.

of enabling students with exceptional financial need to obtain an education beyond high school.¹² Recommendations based on the results of this study called for (1) modification of the state allocation formula to ensure channeling of funds to states with the greatest need, and (2) an increase in the funding level for the EOG Program. According to the study, almost three-fifths of the institutions surveyed reported that their EOG allocation for the 1969-70 academic year was inadequate.¹³

The Bureau of Applied Social Research published a similar status report for the U.S. Office of Education for the College Work-Study Program. Questionnaires were mailed to 2,006 participating institutions. The major conclusion of the study was that the CWS Program was achieving its primary goal of enabling students from low-income families to help defray the costs of postsecondary education with the earnings from part-time and summer employment.¹⁴ On the average, the study reports that the CWS fundings were paying half of the basic costs of attending college. As was reported in the EOG study, two of the most pressing needs are more equitable funding formulae and an overall increase in federal appropriations.¹⁵

¹²Nathalie Friedman and James Thompson, The Federal Educational Opportunity Grant Program: A Status Report: Fiscal Year 1970 (New York: Bureau of Applied Social Research, Columbia University, 1971), p. 12.

¹³Ibid.

¹⁴Nathalie Friedman, Lois W. Sanders, and James Thompson, The Federal College Work-Study Program: A Status Report: Fiscal Year 1971 (New York: Bureau of Applied Social Research, Columbia University, 1973), p. 10.

¹⁵Ibid., p. 5.

McGee conducted a study in West Virginia to determine the impact the federal student financial aid funds might have on the institutions of higher education in that state. McGee reported that the total dollar involvement in the federal programs was determined to be of significant importance to the financing of higher education in West Virginia. The impact of the federal dollars was most dramatically evident: a doubling of aid resources made available to the West Virginia institutions of higher education; a greater reliance upon this resource by two-thirds of the state's degree-granting institutions than upon their own resources; an increase in numbers of students aided from one-in-eight to one-in-five resulting in related increases in enrollments; and a revision of student budgets to allow for actual costs as opposed to hard-core education charges.¹⁶

The most significant analysis of the lack of financial aid research has been reported by Henry S. Dyer. In a study entitled, "Understanding Financial Aid Problems Through Institutional Research," Dyer stated institutional sensitivity to sharing with the public information concerning the inner workings of their aid programs was in part attributable to the colleges not knowing what is happening on their respective campuses and having difficulty finding out.¹⁷

¹⁶ Harold Johnston McGee "An Analysis of the Impact of Federally Supported Student Financial Aid Programs in Institutions of Higher Education in the State of West Virginia" (unpublished dissertation, University of Virginia School of Education, 1968), p. 148.

¹⁷ Henry S. Dyer "Understanding Financial Aid Problems Through Institutional Research" Student Financial Aid and Institutional Purpose (Princeton: College Entrance Examination Board, 1963), p. 56.

Dyer questioned 234 persons involved with institutional research, particularly with student aid, and received 143 replies, including 27 letters, on why the data was unavailable. The survey was an attempt to determine the nature of the research being conducted, the investigators, the priorities, and the bearing the research played upon institutional analysis.

The three most active types of research reported were the resources available; the apportionment of resources among scholarships, loans, and jobs; and the actual cost of education. Of particular note was Dyer's finding that 71 percent of the responses to the question on whether the colleges were making studies to determine how accurately the financial capability of students to meet their expense was estimated by the colleges were no. It was further determined that only 8 of the 116 respondents had published the results of financial aid studies in professional journals.¹⁸

It was stated earlier in this paper that the role of the federal government in student financial aid is comparatively new. A search of the literature reveals that not only is there a limited amount of data available concerning the federal student financial aid programs but there also exists a limited number of studies dealing with student financial aid administration.

Limitations

The study was limited in the following ways:

1. To institutions of higher education in the Southwest that participated in one or more of the Federal Student Finan-

¹⁸Ibid., pp. 56-64.

cial Aid Programs during Fiscal Year 1973.

2. By OE Forms 1036, Institutional Application for Participation in Federal Student Financial Aid Programs, and 1152, Annual Fiscal Operations Report.

Basic Assumptions

It is assumed that the institutions of higher education reported information correctly in the preparation of the reports from which the data is collected. It is further assumed that the institutions are administering the student financial aid programs following federal guidelines. The statistical analysis assumes normal distribution, homogeneity of variance, and random distribution.

Procedures for Collection of Data

Permission was obtained from the Director, Postsecondary Education, U.S. Office of Education, Department of Health, Education and Welfare, Region VI, Dallas, Texas, to utilize the institutional files for this study. Two primary data sources were used: OE Form 1036, Institutional Application for Participation in Federal Student Financial Aid Programs, and OE Form 1152, Annual Fiscal Operations Report. All institutions of postsecondary education are required to file each of these reports annually. OE Form 1036 is usually filed in November, requesting funds for the next fiscal year. OE Form 1152, usually filed during August, reports how the institution actually expended the federal allocation during a given fiscal year.

The following information was collected for each participating institution:

1. Name of Institution
2. Type of institution - University, Four-Year or Two-Year
3. Control of Institution - Public or Private
4. Number of students enrolled at each institution during the 1972-73 academic year
5. Number of aid applicants at each institution during Fiscal Year 1973
6. Amount of NDSL funds actually expended during Fiscal Year 1973
7. Amount of CWS funds actually expended during Fiscal Year 1973
8. Amount of EOG funds actually expended during Fiscal Year 1973
9. Amount of GSL/FISL funds actually expended during Fiscal Year 1973
10. Amount of Institutional Student Employment (ISE) funds actually expended during Fiscal Year 1973
11. Amount of Institutional Grants and Scholarships (IGS) funds actually expended during Fiscal Year 1973

For the purpose of this study, the amounts of student aid used in this study were awarded only to students demonstrating financial need. The method of need analysis is approved by the U. S. Commissioner of Education.

A sub-sample of data was collected by a telephone interview technique from the original number of institutions in the sample. A rating scale was used to determine a low to high rating on institutions utilization of student financial aid funds.

Procedures for Analysis of Data

Descriptive and inferential analysis of data were used to determine levels of significance on the hypotheses. Means, standard deviations, and frequencies were used in the descriptive phase of the analysis. Inferential analysis was used on each hypothesis. Analysis of variance and the Duncan's Multiple Range Test were used to test for levels of significance. A prediction model was calculated on the sample data using regression analysis. The telephone interview questionnaire was subject to analysis by frequency and Chi Square.

Organization of Remainder of Study

Chapter II consists of a review of the literature and research pertaining to the historical development and administration of student aid. Chapter III includes the methods and procedures for collection and treatment of the data. Chapter IV contains the statistical analysis of data and the student aid utilization models derived from the research findings. The final chapter, Chapter V, provides a summary of the findings of the study, conclusions, and recommendations for further study and research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Providing financial assistance for students who need it has been a concern of colleges in this country since their creation. Few men and women have paid their own way through American colleges or universities.¹⁹ Many have been allowed to think that they have, but for a long time, and for good reasons, higher education in the United States has been a major philanthropic endeavor. The remaining text of this chapter is divided into three parts: the historical background, the current research, and the summary.

Historical Background

It is reported in at least one source that the first endowment fund at an American college was the "100 pounds" for scholarship that Lady Anne Mowlson sent across the Atlantic to Harvard College in 1643.²⁰ The American college has been giving itself away ever since.

¹⁹ Frederick Rudolph, "The Origins of Student Aid in the United States," Student Financial Aid and the National Purpose (New York, The College Entrance Examination Board, 1962), p. 1.

²⁰ Samuel Eliot Morrison, The Founding of Harvard University (Cambridge, Massachusetts: Harvard University Press, 1935), p. 309.

In the first era of student aid--roughly from the founding of Harvard College until the Civil War--the American college was searching for some understanding and definition of itself. The difficulties of this search were revealed in the policies, if they may be called that, on student aid.

Inheriting the aristocratic purposes and customs of the English residential college, the American college found itself from the very beginning in the difficult position of having to serve a developing democratic society. The expectations turned toward the colleges were increasingly democratic, and they provided the colleges with some of their earliest experience with government support, with recognizable overt student aid, and with an important experience in hidden aid.²¹

The extent of governmental support to the colleges in the decades before the Civil War has been obscured by some quite misleading folklore about the so-called private college and by inadequate historical investigation. The evidence, however, is sufficient to permit the suggestion that government support was often of crucial importance in the life of the American college and that this support rested on a belief that the state and the local community were obliged--from considerations of their own health and future--to help reduce the cost of higher education for the young men to whom they would one day turn for leadership.²²

²¹Frederick Rudolph, "Myths and Realities of Student Aid," College Board Review, No. 48, (Fall, 1962), p. 18.

²²Rudolph, Origins of Student Aid, p. 3.

Two other considerations underwrote student aid in the pre-Civil War college. One was the extent to which the colleges sought to escape from aristocratic tradition and enter into some closer connection with the people. Another was the necessity of finding some means of inducing students to attend institutions that were being founded in excessive numbers and that were offering unappealing classical courses of study.

The colleges never really solved their problems until after the Civil War when a combination of land-grant colleges, state universities, and the elective principle freed higher education in the United States from the aristocratic tradition; but before the Civil War some valiant efforts were made to bring the costs of higher education within the realm of possibility for young men of slight and modest means.

One of these efforts was the manual labor movement, which theoretically made going to college self-financing, gave students experience in practical skills, and even paid some attention to their physical condition. The notion that young men could pay their own way through college by working at some useful trade was introduced in dozens of colleges.²³

The manual labor movement, which began during the years from 1825-1830, reached its height about 1834 and in less than ten years had ceased to be a force as an educational movement. Several reasons for the

²³Ibid.

decline of the influence of the manual labor movement were: (1) the amount of financial profit expected from the manual labor system did not meet the expectations from school trustees;²⁴ (2) difficulty in combining labor and studies in an institution;²⁵ (3) lack of funds for manual labor facilities; (4) increased manufacturing; and (5) the opening of rich and cheap farms in the West.²⁶ One by one, nearly all of the institutions in which manual labor had been tested found the idea unsatisfactory in practical operation and discontinued it.

In a dynamic, democratic society there was need for a more palatable and effective way of persuading poor boys to go to college, and supporting them once they got there. This way was found in the whole pattern of underpayment and non-payment of professors, who were aware despite their own sacrifices of the accumulating unpaid student bills, in the custom of tuition remission, and in countless other similar devices the means of keeping low cost of a college education. Student aid and general financial support of the American college, therefore, rested squarely on the professors.²⁷ They and state and local governments were

²⁴Many schools on the frontier hoped to stay open with the profits derived from the manual labors of their students. Often, however, there was no market for the goods produced by the manual labor schools.

²⁵Charles Alphaus Bennett, History of Manual and Industrial Education Up to 1870 (Peoria, Illinois: The Manual Arts Press, 1926), p. 192.

²⁶Adolphe E. Meyer, An Educational History of the American People (New York: McGraw-Hill, 1957), p. 229.

²⁷Frederick Rudolph, "Who Paid the Bills," Harvard Review, XXXI No. 2 (Spring, 1961), pp. 152-3.

the major sources of student aid in the decades before the Civil War when individual wealth in the United States was insufficient to support higher education.

Private wealth could not cope with the excessive number of colleges that were spawned by an era of ambitious and competitive denominationalism, an era that introduced first a note of dismay and finally of outright refusal into the tradition of state support. The absence of any widespread public desire for a classical education further weakened the financial structure of the colleges until they were driven into a most bizarre experience with student aid.

In the years between 1835 and 1860, the height of the era of college founding, many institutions sent their agents out on the road to sell what were called perpetual scholarships.²⁸ For a set price, generally in the neighborhood of \$500, a person might buy a so-called perpetual scholarship entitling the owner to free tuition for one person in perpetuity.

There are a number of ways of looking at this phenomenon. It was a characteristically American get-rich-quick scheme, and it was clearly evident that the country had too many colleges and too few students. But from a consideration of its significance for the history of student aid, the perpetual scholarship scheme emphasizes the early recognition of student aid as a device for recruiting students and strengthening the weak and bankrupt institutions of higher learning.²⁹

²⁸Frederick Rudolph, *The American College and University*, (New York: Alfred A. Knopf, Inc., 1962), pp. 190-1.

²⁹Rudolph, "Myths," p. 20.

The perpetual scholarship scheme did not really come to grips with the problems that were plaguing the colleges but it did add the dimension of recruitment to those various other purposes, such as public service and equality of opportunity, that student aid had heretofore sustained.

Some organized philanthropy did exist prior to the Civil War. The American Education Society, founded as an arm of Congregationalist endeavor in 1815, supported promising ministerial candidates in a number of colleges.³⁰

During and after the Civil War, student aid entered a new era. The movement for technological and scientific education, which had been underway before the war, created new and more popular institutions of higher education. The Morrill Act of 1862 put Federal funds into the state development of land-grant colleges. Municipalities also started colleges. Federal, state, and municipal support of higher education was in the form of grants directly to the colleges, rather than to students. Tuition was kept low as possible. By 1900, state legislature had restricted their funds primarily to state-affiliated institutions of higher education. Some state legislatures provided free tuition to Civil War veterans at state universities. Soon the kind of aid and support that had once been scattered among the many so-called private colleges was increasingly concentrated in the agricultural and mechanical colleges and state universities. Many private colleges were forced to depend on student fees and philanthropy. Consequently, many of the private

³⁰Ibid.

institutions founded prior to the Civil War were forced to close.³¹

In the meantime, those institutions that had never enjoyed aid from the state or that no longer could rely on state support--such as Harvard and Yale and the countless denominational colleges--were equally prepared to maintain the tradition of student aid. In his inaugural address of 1869 at Harvard, President Eliot remarked that, "No good student need ever stay away from Cambridge or leave college simply because he is poor."³² This ideal remained the goal of most every American college and university, private and public, and it often came close to being real because, in the decades after the Civil War, American institutions of higher learning were able to draw on the resources of the country's first great crop of millionaires. The meager "charity funds" of the antebellum years became sizable endowments for scholarships, often the gift of one-time poor boys who had achieved success and who saw in scholarship funds a support of the American Dream.

In addition to the long standing tradition of institutions providing financial assistance to needy students, the federal government has been in the business of aiding students through programs which have usually been aimed at highly specific goals or groups and have been of relatively short duration.

The establishment of the service academies (the Military Academy in 1802, the Naval Academy in 1845 and the Air Force Academy in 1954) and

³¹ Ibid.

³² Richard Hofstadter and Wilson Smith, American Higher Education: A Documentary History, (Chicago: University of Chicago Press, 1961), Vol. II, p. 613.

the establishment of Reserve Officer Training Corps (the first being Army ROTC in 1916) were early federal attempts to provide higher education to students interested in military careers. Many forms of federal assistance to institutions, such as that under the Morrill Act of 1862, were attempts to aid students indirectly by attempting to keep down costs to students. The Smith Hughes Act (1917) provided aid to students preparing to teach industrial subjects in secondary school. The Vocational Rehabilitation Act (1920) provided aid to disabled individuals, who often used such aid to attend college.³³

The National Youth Administration, created during the Depression, administered an extensive program of student aid in the form of employment.³⁴ Despite the fact that many educators were concerned about the possibility of Federal control, approximately 1,500 out of the 1,700 eligible colleges participated in the program, administered at the state level by federal officials. The college administered the programs, but the students received their paychecks directly from the federal government. Harrison relates that as the result of this program, it was necessary to establish and staff a student assistance office during the academic year 1934-35 at Ohio State University.³⁵ Although the responsibilities then were previously centered around student employment, the makings of the financial aid officer as we know him today were there.

³³Casazza, Career Patterns, p. 8.

³⁴Nash, "Student Financial Aid," p. 1341.

³⁵Rodney J. Harrison, "I'd Rather Do It Myself," (paper presented at a workshop for Financial Aid Administrators sponsored by the College Entrance Examination Board, Norman, Oklahoma, October 7, 1969), p. 2.

During World War II Student War Loans were first made available.³⁶ Although it was a small program, it was important, because these were the first federal loans to college students. The program was only operational from 1942 to 1944. Some \$3,000,000 was lent to about 11,000 students in scientific and technical fields. The students were allowed to borrow up to \$500 per year and had low interest payments. The loan recipients were expected to accept war related employment upon graduation.

The Servicemen's Readjustment Act (1944), better known as the G.I. Bill of Rights, and subsequent G.I. Bills provided aid to college students on a scale never before known. Almost fifteen million veterans were eligible to receive training and the peak in enrollment was approximately 1.1 million in 1947. In 1946 and 1947, approximately one-half of all college level students were veterans, and enrollment was almost double that of a decade earlier (1.3 million vs 2.6 million).³⁷ According to the Administrators Annual Report for FY' 73, some 2.1 million veterans received almost 2.5 billion dollars to further their post-secondary education.³⁸

The first two major forms of federal aid to college students--the Student Work Program of the Depression years and the G.I. Bill of the 1940's and 1950's--differ considerably from the types of aid currently in effect.³⁹ In neither case did the federal government give money directly

³⁶Nash, "Student Financial Aid," p. 1341.

³⁷Ibid., p. 1342.

³⁸The Administrators Annual Report for Fiscal Year 1973, Report to the President of the United States, (Washington, D.C., Government Printing Office, 1973), p. 183.

³⁹Nash, "Student Financial Aid," p. 1342.

to the institution for it to disburse to students. Although the colleges and universities did decide which student would be eligible for jobs under the Student Work Program, the Veterans Administration determined eligibility under the G.I. Bill even before a student had applied to college. Neither program required any contribution of funds from the institution of higher education. Each of the two programs was intended to solve a specific problem and to last for a limited duration. Most of today's federal student aid programs allow the individual college or university to determine who shall or shall not receive aid.

The need for the federal government to provide financial assistance for needy students on a large scale became increasingly clear. In 1947, the President's Commission on Higher Education, appointed by President Truman, reported:

The old comfortable idea that 'any boy can get a college education who has it in him' simply is not true. Low family income, together with the rising costs of education, constitutes an almost impossible barrier to college education for many young people.⁴⁰

The Commission further stated:

By allowing the opportunity for higher education to depend so largely on the individual's economic status, we are not only denying to millions of young people the chance in life to which they are entitled; we are also depriving the nation of a vast amount of potential leadership and potential social competence it severely needs.⁴¹

In 1956, President Eisenhower appointed a Committee on Education Beyond the High School.⁴² Named for its chairman, The Josephs Committee's

⁴⁰Hofstadter and Smith, American Higher Education, p. 977.

⁴¹Ibid., p. 979.

⁴²Nash, "Student Financial Aid," p. 1343.

recommendations had greater acceptance by educators, and many of their suggestions have met with favorable congressional action. The committee spoke of an urgent need to do something for teachers, which consequently led to the passage of the National Defense Education Act of 1958. The committee also recommended that a federal work study program be implemented and that there was a need for a federal policy of aid to higher education which would allow for better coordination of the numerous federal programs affecting higher education. Despite the fact that the Josephs report was well received, it seems unlikely that any substantial federal legislation would have resulted had it not been for the technological threat that Russia's Sputnik represented.⁴³

The National Defense Education Act was passed as an emergency measure designed to counteract serious deficiencies. Student loans were made a part of the program and those who went into elementary and secondary teaching were eligible for cancellation of up to one-half of their loans. The program first became operational during the 1959-60 academic year.⁴⁴ The loan fund amounted to 80 million dollars, 90 per cent of which was federal funds, the remaining 10 per cent being participating institutions' "matching" funds. Approximately 1,300 institutions of higher education participated in the student loan program that first year. Some 140,000 loans were made in 1960 averaging nearly \$500.

During FY '73, 286 million dollars of new federal money was made available to 2,293 participating institutions. The additional funding,

⁴³Ibid.

⁴⁴Department of Health, Education and Welfare, National Defense Student Loan Program Manual, p. 1.

plus funds from previous years which are repaid to the participating institutions to be reloaned, assisted some 650,000 students.⁴⁵

The loan program has now been broadened so that almost all students enrolled in institutions of postsecondary may be eligible to borrow. The cancellation feature was broadened so that elementary and secondary teachers going into poverty areas could cancel up to 100 per cent of their loans. College teachers are also eligible for cancellation.

The program was intended to help students from poorer families, and approximately 70 per cent of the borrowers were from families earning \$6,000 a year or less. The National Defense Student Loan Program (the name of the program was changed as it became available to more students) has become the first long-term federal program to aid undergraduates.

In 1964, the Congress of the United States passed the Economic Opportunity Act, which among its provisions authorized the College Work-Study Program.⁴⁶ This program combines federal and college matching funds to encourage and to extend the employment of students, both on the campus and in nonprofit off-campus agencies. Collegiate institutions that participate in the College Work-Study Program are required to maintain, from their own funds, their previous level of student employment;

⁴⁵U.S., Department of Health, Education, and Welfare, Office of Education, Bureau of Higher Education, Notification to Members of Congress: Approval of Allocations to Institutions Participating in the National Direct Student Loan Program August 29, 1972, Washington, D.C. p. i.

⁴⁶Department of Health, Education and Welfare, College Work Study Program Manual, p. 1.

this program is intended to assist and to advance but not to replace, the efforts of the colleges in providing jobs for students. Initially, the College Work-Study Program was restricted to students from extremely low income families; these limitations have since been revised, and now it is required only that preference in employment be given to students from low income families.

During the academic year 1966-67, the initial funding year for this program, 144 million dollars was made available to needy students. By FY '73, 2,666 participating institutions had received almost 268 million dollars to assist approximately 588,000 eligible students.⁴⁷

The Educational Opportunity Grant Program, part of the Higher Education Act of 1965, was specifically designed for needy students.⁴⁸ This program authorized direct grants, which were not to be repaid, to students who demonstrated that they and their families were unable to pay for higher education. The grants could not exceed \$800 per academic year or one-half the amount the student needed to go to college, whichever was less, and a matching amount must be made available to the student from other approved sources of student financial aid. In the academic year 1966-67, the first of the program, \$46 million was awarded to some 123,000 students. The average grant was \$374.

⁴⁷U.S., Department of Health, Education and Welfare, Office of Education, Bureau of Higher Education, Notification to Members of Congress: Approval of Grants to Institutions Participation in the Educational Opportunity Grant Program, June 30, 1972, Washington, D.C., p. i.

⁴⁸Department of Health, Education and Welfare, Educational Opportunity Grant Program Manual, p. 1.

During FY '73, almost 208 million dollars was made available to 317,450 students attending 2,283 participating institutions of post-secondary education. The average grant was \$658 for the academic year.⁴⁹

The Higher Education Act of 1965 also authorized the Guaranteed Loan Program, by which the federal government subsidizes the interest and helps to provide the guarantee on loans obtained by students from banks and other private lenders.⁵⁰ Students are allowed lengthy repayment terms and are charged low interest. The first full year that the program was in operation was the academic year 1966-67, when 330,000 students borrowed approximately \$250 million. During fiscal year 1973, the Guaranteed Student Loan Program had grown to the point that almost 1.1 million student loans totaling 1.198 billion dollars were made.⁵¹

The Guaranteed Student Loan Program, which is the largest federal financial aid program for college students, was the first to offer substantial aid to students from middle-income families. Congress has been convinced that one of the most important means of aiding more students to attend college is to allow the student himself to pay part of the cost of his increased productivity from his anticipated increased earnings.

⁴⁹ U.S., Department of Health, Education and Welfare, Office of Education, Bureau of Higher Education, Notification to Members of Congress: Approval of Grants to Institutions Participating in the College Work Study Program, June 28, 1972, Washington, D.C., p. i.

⁵⁰ Bureau of Higher Education, Office of Education, U.S., Department of Health, Education and Welfare, Federally Insured Student Loan Program Lenders Manual, 1972, pp. 2-3.

⁵¹ Alice F. Hansen, Division of Insured Loans Monthly Report, Annual Loan Volume, Washington, D.C., February 25, 1974, p. 4.

Federal student financial aid programs are now making nearly 2.9 billion dollars per year available to students at institutions of higher education.⁵² These programs have found wide acceptance among administrators of universities and colleges. One reason for their growth is that they do not threaten the anatomy of the institutions and avoid the controversy over the separation of church and state. Although the funds go to students and not to institutions, the major beneficiaries are the institutions, who now find that more students are able to afford higher education. Despite the fact that college costs have been rising steadily in recent years, the various increases in financial aid that have occurred in the last six or seven years have meant that a substantial number of students can now attend college who could not have previously.

Current Research

The concept of student assistance is not new to American higher education; however, the role of the federal government in providing national student financial aid programs which are directly available to students through participating institutions of postsecondary education is comparatively new.

Studies dealing with the direct support of the federal government in student financial aid programs can be covered by the general topic "Administration of Student Financial Aid." Studies related to the general topic would include the student financial aid officer, the develop-

⁵²Frank Skinner, ed., Higher Education and National Affairs, Vol. 23 #6, February 8, 1974, Washington, D.C., pp. 2-3.

ment of student financial aid administration as a profession, and the effectiveness of a specific program. Studies dealing with each of these areas are reviewed below. The reader should note that several of the studies discussed will include more than one of the specific areas of the general topic, Administration of Student Financial Aid.

The first major study of the Administration of Student Financial Aid was conducted by Nash for the College Entrance Examination Board. A questionnaire was sent to 1,094 accredited undergraduate institutions of higher education. This study which later became the basis for his doctoral dissertation⁵³ was primarily concerned with the role of the financial aid administrator, the administrative organization of the financial aid office, and the intra-institutional relationships the financial aid officer may experience.⁵⁴

In general, Nash found his respondents to be well educated, most holding a masters degree, mature administrators who are reasonably well satisfied with the nature of their work provided the position was full-time. The financial aid officers ranked themselves approximately equal in the college administrative hierarchy to the Director of Admissions and the Registrar. In terms of occupational maturity, Nash found that the aid administrator has a long way to go. Full-time aid administrators are paid quite a low salary. There is little movement of aid administrators from college to college, although in many ways the function is

⁵³George Nash, "The Emergence and Crystallization of a Bureaucratic Function: Student, Financial Aid Administration," Dissertation Abstracts, Vol. 30, Pt. 5, (March-April, 1970), 4566-A.

⁵⁴Nash and Lazarsfeld, New Administrator on Campus, p. 7.

readily transferable. Aid administrators have done little research and published little. There is neither a central publication for financial aid research nor an effective national organization of aid administrators. Aid administrators do not yet have a collective voice. Puryear repeated Nash's survey questionnaire in some 340 two-year colleges and obtained generally similar results.⁵⁵ The two-year aid administrator was slightly older than his four-year counterpart but tended to have a smaller supporting staff. One understandable difference lay in the fact that senior college aid officers are much more likely to have graduated from their college of employment than are those in junior colleges.

In 1972, Gedney repeated Nash's survey questionnaire in the State of Virginia.⁵⁶ Using the findings of the Puryear study as criteria and adopting his procedures, Gedney received responses from twenty-one financial aid officers at the eighteen community colleges within the state. Gedney found that the master's degree is a virtual prerequisite for the position of financial aid officer. Most of the financial aid officers in the Virginia Community College System had had no previous financial aid experiences; consequently, a need for some type of formalized training was reported. Gedney also found that the financial aid officers in the Virginia Community College System were generally satisfied with their work although they did not intentionally plan a career in financial aid administration.

⁵⁵Puryear, "A Descriptive Study," p. 63.

⁵⁶Ellis Clinton Gedney, "A Study of Selected Characteristics and Functions of Financial Aid Officers Within the Virginia Community College System," (Unpublished Ed.D. Dissertation, University of Virginia, 1972), pp. 94-5.

An earlier study was conducted by the Western Committee for Higher Education Surveys and the College Entrance Examination Board. The survey was concerned with the present level of professional development of financial aid officers, their training needs and their attitudes concerning future development of the profession. The study was based upon responses of aid directors representing 122 institutions in the Western United States. The results of the study showed the annual turnover of financial aid officers to be lower than previously indicated, and most of the moderate to large aid programs were being administered by a full-time aid officer. Most respondents indicated that instructional workshops were the favored method of maintaining professional competence and continuing student financial aid training was desirable. Recommended steps for furthering development of the aid profession included a code of ethical standards, state and regional meetings, and a journal devoted to financial aid.⁵⁷

North, in a speech given at a financial aid management workshop, believes that financial aid administration is becoming more of a profession but the role of the financial aid administrator is not yet fully recognized on campus.

In the preceeding decade, we have seen our own disorganizing, unsophisticated ranks emerge into increasingly professional groups. . . . In contrast to a time when student aid programs were designed and initiated with little student aid competence involved, we are now making our voices heard as programs are reworked from year to year. We are perhaps more powerful off the campus than on. During these ten years, many of us have operated on the outer fringes of the

⁵⁷ Warren W. Willingham, Professional Development of Financial Aid Officers, (Palo Alto, California: College Entrance Examination Board, 1970), p. 1.

administrative processes of our institutions. Many of us still find ourselves left out of the decision-making process relative to matters in which we are directly and importantly involved. . . But this is less true than it used to be and there are signs here and there that the future will be quite different than the past.⁵⁸

Casazza approached the administration of student financial aid subject by conducting a study of the career patterns of student financial aid officers. The study was concerned with the educational background and plans of practicing financial aid directors, their work experience prior to becoming financial aid directors, their relative positions within their institutions as financial aid directors, and their expectations and aspirations for their professional futures.⁵⁹ A questionnaire was sent to the directors of financial aid at the 179 institutions that had enrollments of over 10,000 students in the Fall of 1969.

In general, Casazza found that based on their duties and their positions with the administrative structure of their respective institutions, financial aid directors are middle-level administrators in higher education. He also reported that most aid directors become directors by chance and have little or no formal training. The study also indicated that the financial aid directors viewed their positions as a life-long career, although they consider work as a financial aid director good preparation for other administrative positions in higher education. The younger aid directors aspire to advance to top administrative positions

⁵⁸Walter M. North, "Some Observations on the State of the Profession." (paper presented at the Financial Aid Management Workshop sponsored by the American College Testing Program, Minneapolis, Minnesota, February, 1970), p. 5.

⁵⁹Casazza, "Career Patterns," p. 23.

and do not plan to remain in financial aid until retirement.⁶⁰

In 1971, the Bureau of Applied Social Research, under contract with the U.S. Office of Education, published a status report of the Educational Opportunity Grant Program. Questionnaires were sent to 1,939 institutions participating in the EOG Program. The major conclusion of the study was that the EOG Program was achieving its primary objective of enabling students with exceptional financial need to obtain an education beyond high school.⁶¹ Recommendations based on the results of this study called for (1) modification of the state allocation formula to ensure channeling of funds to states with the greatest need, and (2) an increase in the funding level for the EOG Program. According to the study, almost three-fifths of the institutions surveyed reported that their EOG allocation for the 1969-70 academic year was inadequate.⁶²

The Bureau of Applied Social Research published a similar status report for the U.S. Office of Education for the College Work-Study Program. Questionnaires were mailed to 2,006 participating institutions. The major conclusion of the study was that the CWS Program was achieving its primary goal of enabling students from low-income families to help defray the costs of postsecondary education with the earnings from part-time and summer employment.⁶³ On the average, the study reports that the CWS fundings were paying half of the basic costs of attending college.

⁶⁰Ibid., pp. 214-217.

⁶¹Friedman and Thompson, The Federal Educational Opportunity Grant Program: A Status Report, p. 12.

⁶²Ibid.

⁶³Friedman, Sanders, and Thompson, The Federal College Work-Study Program: A Status Report, p. 10.

As was reported in the EOG study, two of the most pressing needs are more equitable funding formulae and an overall increase in federal appropriations.⁶⁴

McGee conducted a study in West Virginia to determine the impact the federal student financial aid funds might have on the institutions of higher education in that state. He reported that the total dollar involvement in the federal programs was determined to be of significant importance to the financing of higher education in West Virginia. The impact of the federal dollars was most dramatically evident in the effective doubling of aid resources made available to the West Virginia institutions of higher education; the greater reliance upon this resource by two-thirds of the state's degree-granting institutions than upon their own resources; the increase in numbers of students aided from one-in-eight to one-in-five; a related increase in enrollments, and the revision of student budgets to allow for actual costs as opposed to hard-core educational charges.⁶⁵

One source sums up the status of the financial aid administration profession as follows:

The profession of student financial aid administration is quite young, and the associated literature is limited. Perhaps the closest thing to a general text on aid administration is the Manual for Financial Aid Officers published by the CEEB. One of the major research problems in the administration of financial aid is accountability. There have been some good studies of aid disposal but surprisingly little research on the effects of aid either on a short- or long-range basis. There has also been relatively little systematic

⁶⁴ Ibid., p. 5.

⁶⁵ McGee, Federally Supported Programs in West Virginia, p. 148.

development of literature concerned with administrative procedures and professional development.⁶⁶

The most significant analysis of the lack of financial aid research has been reported by Henry S. Dyer. In a study entitled, "Understanding Financial Aid Problems Through Institutional Research" Dyer stated institutional sensitivity to sharing with the public information concerning the inner workings of their aid programs was in part attributable to colleges not knowing what is going on and being hard put to find out.⁶⁷

Dyer questioned 234 persons involved with institutional research, particularly with student aid, and received 143 replies, including 27 letters, on why the data was unavailable. The survey had attempted to determine the nature of the research being conducted, the investigators, the priorities, and the bearing the research played upon institutional analysis.

The three most active types of research reported were the resources available, the apportionment of resources among scholarships, loans, and jobs, and the actual cost of education. Of particular note was Dyer's finding that 71 per cent of the responses to the question on whether the colleges were making studies to determine how accurately the financial capability of students to meet their expense was estimated by the colleges were no. It was further determined that only eight of the 116 respondents

⁶⁶ Warren W. Willingham, The Source Book for Higher Education (New York: College Entrance Examination Board, 1973), p. 61.

⁶⁷ Dyer, "Understanding Financial Aid Programs," p. 56.

had published the results of financial aid studies in professional journals.⁶⁸

Summary

The review of related literature contains two major sections, the historical background and the current research. It has been attempted to provide a historical perspective of student assistance and its role in the development of American higher education and the type and direction the current search seems to be taking.

The first section of this chapter was devoted to a historical review of student aid. The American college has had some type of student aid available for needy students since the first reported scholarship fund was established at Harvard College in 1643.⁶⁹

As the nature of American higher education developed and changed, so did the nature of student aid. In the era before the Civil War, institutions of higher education were predominantly private--as were the sources of student aid, which consisted of some type of scholarships or employment.

Between the Civil War and the second World War, the low-cost state, land-grant institutions of higher education began to seriously compete with the private colleges for students. The types of sources of student aid did not change significantly during this era, although the student loan became an acceptable method of financing one's education.

⁶⁸Ibid., pp. 56-64.

⁶⁹Morrison, The Founding of Harvard, p. 309.

After World War II, American higher education experienced a period of remarkable growth and diversification. The same was true of student aid. Students not only had an increasing number of low-cost public colleges to attend, but they also had an increasing variety of sources of student aid. It was during this era that the federal grant became involved in large-scale programs of student financial aid.

The current research was reviewed within the general topic of Administration of Student Financial Aid. Studies related to the general topic included the student financial aid officer, the development of student financial aid administration as a profession, and the effectiveness of a specific program. Studies dealing with each of these areas were reviewed.

The studies dealing with the student financial aid officer had similar findings. In general, the financial aid officer, whether at a two- or four-year institution has a master's degree, has had no formal training for the position, and got the job by chance. Although he considers himself on equal status of a registrar or director of admissions and enjoys his work, he is generally paid less.

Several of the studies reviewed in this chapter reported that financial aid administration is in its infancy stage of becoming a profession. Most writers concluded the "infant" will become an "adult." However, there are several developmental stages which must first occur. Some of the key stages include training for financial aid administrators, strengthening the national organization to allow its representatives to speak for the profession, and encouraging the development of a professional literature and an effective means of distributing it.

It was the conclusion of several of the investigators that, in general, the federal student financial aid programs were being utilized to meet their intended purpose. Results of the national studies showed these programs were enabling needy students to attend college. Recommendations included additional funding of the federal programs and a more equitable state allocation process.

CHAPTER III

METHODOLOGY AND EXPERIMENTAL DESIGN

It was the purpose of this investigation to ascertain what relationships size, type and control may exert on the amount of utilization of student financial aid funds at institutions of higher education in the Southwest and to develop a student financial aid utilization model in order to provide useful data to assist program officers in their work with colleges and universities in the States of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. A discussion of the selection of the sample, basic assumptions of the study, procedures for collection of data, kinds of student financial aid and the analysis of data will be included.

Selection of Sample

For the purposes of this study, all two- and four-year colleges and universities, both public and private, in the Southwest that participated in one or more of the federal student financial aid programs during fiscal year 1973 comprised the sample. The number of institutions reported by state, type and control are listed in Table 1.

Basic Assumptions

It is assumed that the institutions of postsecondary education reported correct information in the preparation of the reports from which the data is collected. It is further assumed that the institutions

are administering the student financial aid programs following the federal guidelines. The statistical analysis assumes normal distribution, homogeneity of variance, and random distribution.

TABLE 1
Postsecondary Institutions Included in the Sample

STATE	TYPE	CONTROL	NUMBER
Arkansas	Public	University	5
		Four-year	4
		Two-year	3
	Private	University	3
		Four-year	5
		Two-year	3
Louisiana	Public	University	12
		Four-year	3
		Two-year	5
	Private	University	5
		Four-year	5
		Two-year	0
New Mexico	Public	University	6
		Four-year	0
		Two-year	4
	Private	University	0
		Four-year	3
		Two-year	0
Oklahoma	Public	University	7
		Four-year	5
		Two-year	15
	Private	University	3
		Four-year	5
		Two-year	3
Texas	Public	University	26
		Four-year	0
		Two-year	40
	Private	University	15
		Four-year	23
		Two-year	<u>5</u>
Total			213

Procedures for Collection of Data

Permission was obtained from the Director, Postsecondary Education, U.S. Office of Education, DHEW, Region VI, Dallas, Texas, to utilize the institutional files for the purpose of collection of data pertinent to this study. The data was collected from two primary sources, OE Form 1036, Institutional Applications for Participation in the Federal Student Financial Aid Programs, and OE Form 1152, Annual Fiscal Operations Reports. All participating institutions of postsecondary education are required to file each of these reports annually. Data was collected in tabular form to be encoded, and statistical tests of significance was then performed for the study.

The questions used in the telephone interview questionnaire were selected by the investigator to gain additional information in nine important areas in the utilization of student financial aid funds. The subject institutions were selected by obtaining the average amount of student financial aid utilized per aid applicant and then selecting the five highest and the five lowest amounts of student financial aid utilization.

This grouping yielded a complete cross section under study with five institutions for each area. The telephone interviews were conducted by the investigator during the hours of nine a.m. to four p.m. during the working day.

Kinds of Student Financial Aid

For the purpose of testing the hypotheses, the following kinds of student financial aids were used:

1. National Direct Student Loan (NDSL) - A loan program for undergraduate and graduate students who are attending a participating postsecondary institution on at least a half-time basis. Borrower must demonstrate financial need to receive a NDSL. NDSL funds are provided on a 90 percent federal/10 percent institutional matching basis.
2. College Work-Study (CWSP) - A part-time employment program for undergraduate and graduate students who are attending a participating postsecondary institution on at least a half-time basis. Students must demonstrate financial need to be eligible for the CWSP. CWSP funds are provided on an 80 percent federal/20 percent institutional matching basis.
3. Educational Opportunity Grant (EOG) - A grant program for full-time undergraduate students who are attending a participating postsecondary institution. Students must demonstrate exceptional financial need to be eligible for a EOG. EOG funds are 100 percent federal dollars.
4. Guaranteed Student Loan/Federally Insured Student Loan (GSL/FISL) - A loan program for undergraduate and graduate students who are attending an eligible college or university, a school of nursing, or a vocational, technical, trade, business, or home-study school. Funds for this program are borrowed directly from a bank, credit union, savings and loan association, or another participating lender. These loans are guaranteed by a state or private, nonprofit agency, or are insured by the federal government.

5. Institutional Student Employment (ISE) - A part-time employment program for undergraduate and graduate students who are attending a postsecondary institution. The institution provides 100 percent of the funding. Students may or may not have to demonstrate financial need to be eligible for these funds.
6. Institutional Grants and Scholarships (IGS) - Nonfederal resources of student financial aid other than loans and work. Institutional grants and scholarships may include waiver of tuition and/or fees, and scholarships of all types controlled by the institution. Students may or may not have to demonstrate financial need to be eligible for these funds.

Analysis of Data

The sample data was collected, grouped according to states, and encoded. Each kind of aid was divided by size of institution to determine the average amount of aid per student applicant.

The sample data was subject to a descriptive and inferential analysis. The descriptive analysis was calculated using means, standard deviations and frequencies for each group variable. The inferential statistics were calculated by using the analysis of variance and the Duncan's Multiple Range Test to accept or reject the hypotheses at the .05 level of significance.

Regression analysis was used to generate the prediction models over the group variables. Significance was reported on the prediction models at the .05, .10 and .25 levels.⁷⁰

⁷⁰Bernard Ostle, Statistics and Research (Ames, Iowa: State University Press, 2nd Edition, 1963), pp. 164-177.

Frequency and Chi Square analysis were used to determine the levels of significance for the telephone interview questionnaire. Significance was reported at the .05 level for the Chi Square while the frequencies were listed in tabular form by type and control of institution.

CHAPTER IV

Presentation and Analysis of Data

Statistical analysis of the sample data was used to reach conclusions that would assist program officers in their work with colleges and universities in the states of Arkansas, Louisiana, New Mexico, Oklahoma and Texas. The purpose of this chapter will be to ascertain what significant relationships size, type, and control exerted on the amount of utilization of student financial aid funds at institutions of postsecondary education in the Southeast and develop a student financial aid utilization model. All inferential analysis will be accepted or rejected at the .05 level of significance.

Analysis of Data

Hypothesis One stated that there will be no significant difference between the average amount of assistance per aid applicant at publicly controlled and privately controlled institutions. The descriptive analysis of this hypothesis is found in Table 2 for publicly controlled institutions and in Table 3 for privately controlled institutions. The mean represents the average dollar amount of expenditure per aid applicant for a given kind of student financial aid at a particular type or control of institution of postsecondary education in the Southwest. The standard deviation is a measure of dispersion from

from the average dollar amount of expenditure per aid applicant for a given kind of student financial aid at a particular type or control of institution in the Southwest.

TABLE 2

Means and Standard Deviations of the Average Amount
of Assistance per Aid Applicant at Publicly
Controlled Institutions

KINDS OF ASSISTANCE	NUMBER	MEAN	S.D.
CWSP	136	226.19	135.26
EOG	136	91.55	68.37
NDSL	136	162.43	171.19
ISE	136	76.90	300.68
GSL/FISL	136	179.13	253.92
IGS	136	53.61	70.85

The means range from a high of 226.19 for CWSP to a low of 53.61 for IGS. The standard deviations range from a high of 300.68 for ISE to a low of 68.37 for EOG.

TABLE 3

Means and Standard Deviations of the Average Amount
of Assistance per Aid Applicant at Privately
Controlled Institutions

KINDS OF ASSISTANCE	NUMBER	MEAN	S.D.
CWSP	77	224.25	195.77
EOG	77	165.24	115.99
NDSL	77	330.58	204.49
ISE	77	91.12	115.79
GSL/FISL	77	195.79	177.16
IGS	77	287.45	351.55

The means range from a high of 330.58 for NDSL to a low of 91.12 for ISE. The standard deviations ranged from a high of 351.55 for IGS to a low of 115.79 for ISE.

The analysis of variance table was used to present the results of the data analysis. The table contains several values that are used to determine a value of significance and the F distribution. The source of the data is labeled as between group variances, within group variances, and total variances of the data. Each of these sources has associated components that yield the F ratio. The components are: DF for the degrees of freedom determination, SS for the sum of the squares determination, and MS for the means squared determination. The F ratio test value was obtained by the division of the means squared between, by the means squared within. The test value obtained was then compared to a tabular value in an F distribution table with the associated degrees of freedom and alpha level. The tabular value obtained was listed at the base of each of the tables. The test of significance was made in the comparison of the F ratio to the tabular F distribution value. The hypotheses were accepted when the F ratio was less than the tabulated F distribution value and rejected when the F ratio was greater than the tabulated F distribution value.

Hypothesis One was rejected for the variables EOG, NDSL and IGS at the .05 level of significance. All other variables in this hypothesis were not significant.

The CWSP variable was not significant with the one-way analysis of variance in the comparison of publicly controlled and privately controlled institutions. The analysis of variance data is presented in Table 4.

TABLE 4

Analysis of Variance of CWSP for the Average
Amount of Assistance per Aid Applicant at
Publicly Controlled and Privately
Controlled Institutions

SOURCE	DF	SS	MS	F
Between	1	185.54	185.54	0.0073*
Within	211	5382737.25	25510.60	
Total	212	5382922.79		

* $p > .05$, $F_t (.05, 1, 211) = 3.84$

The EOG variable was significant with the one-way analysis of variance in the comparison of publicly controlled and privately controlled institutions. The analysis of variance data is presented in Table 5.

TABLE 5

Analysis of Variance of EOG for the Average Amount of
Assistance per Aid Applicant at Publicly Controlled and
Privately Controlled Institutions

SOURCE	DF	SS	MS	F
Between	1	267020.66	267020.66	34.07*
Within	211	1653553.60	7836.75	
Total	212	1920574.26		

* $p \leq .05$, $F_t (.05, 1, 211) = 3.84$

The Duncan's Multiple Range Test (24.75) indicated that the privately controlled institutions (165.24) had a higher average amount of assistance per aid applicant than did the publicly controlled institutions (91.55).

The NDSL variable was significant with the one-way analysis of variance in the comparison of publicly controlled and privately

controlled institutions. The analysis of variance data is presented in Table 6.

TABLE 6

Analysis of Variance of NDSL for the Average Amount of Assistance per Aid Applicant at Publicly Controlled and Privately Controlled Institutions

SOURCE	DF	SS	MS	F
Between	1	1390096.22	1390096.22	41.11*
Within	211	7134165.00	33811.21	
Total	212	8524261.22		

* $p \leq .05$, $F_t (.05, 1, 211) = 3.84$

The Duncan's Multiple Range Test (51.40) indicated that the privately controlled institutions (330.58) had a higher average amount of assistance per aid applicant than did the publicly controlled institutions (162.43).

The ISE variable was not significant with the one-way analysis of variance in the comparison of publicly controlled and privately controlled institutions. The analysis of variance data is presented in Table 7.

TABLE 7

Analysis of Variance of ISE for the Average Amount of Assistance per Aid Applicant at Publicly Controlled and Privately Controlled Institutions

SOURCE	DF	SS	MS	F
Between	1	9933.25	9933.25	0.16*
Within	211	13224167.38	62673.78	
Total	212	13234106.62		

* $p > .05$, $F_t (.05, 1, 211) = 3.84$

The GSL/FISL variable was not significant with the one-way analysis of variance in the comparison of publicly controlled and privately controlled institutions. The analysis of variance data is presented in Table 8.

TABLE 8

Analysis of Variance of GSL/FISL for the Average Amount of Assistance per Aid Applicant of Publicly Controlled and Privately Controlled Institutions

SOURCE	DF	SS	MS	F
Between	1	13651.12	13651.12	0.26*
Within	211	11089337.06	52556.10	
Total	212	11102988.19		

* $p > .05$, $F_t (.05, 1, 211) = 3.84$

The IGS variable was significant with the one-way analysis of variance in the comparison of publicly controlled and privately controlled institutions. The analysis of variance data is presented in Table 9.

TABLE 9

Analysis of Variance of IGS for the Average Amount of Assistance per Aid Applicant at Publicly Controlled and Privately Controlled Institutions

SOURCE	DF	SS	MS	F
Between	1	2688215.47	2688215.47	56.33*
Within	211	10070316.62	47726.62	
Total	212	12758532.09		

* $p \leq .05$, $F_t (.05, 1, 211) = 3.84$

The Duncan's Multiple Range Test (61.07) indicated that the privately controlled institutions (287.45) had a higher average amount of assistance per aid applicant than did the publicly controlled institutions (53.61).

Hypothesis Two stated that there will be no significant difference between the average amount of assistance per aid applicant at universities and four-year colleges. The descriptive analysis of this hypothesis is found in Table 10 for universities and in Table 11 for four-year colleges.

TABLE 10

Means and Standard Deviations of the Average Amount of Assistance per Aid Applicant at Universities

KINDS OF ASSISTANCE	NUMBER	MEANS	SD
CWSP	78	266.42	142.90
EOG	78	108.85	92.32
NDSL	78	120.52	134.44
ISE	78	25.70	34.83
GSL/FISL	78	88.30	103.75
IGS	78	68.67	99.14

The means range from a high of 266.42 for CWSP to a low of 25.70 for ISE. The standard deviations range from a high of 142.90 for CWSP to a low of 34.83 for ISE.

TABLE 11

Means and Standard Deviations of the Average Amount of Assistance per Aid Applicant at Four-Year Colleges

KINDS OF ASSISTANCE	NUMBER	MEANS	SD
CWSP	53	234.22	165.36
EOG	53	168.95	104.91
NDSL	53	320.94	167.66
ISE	53	87.26	111.70
GSL/FISL	53	175.58	171.08
IGS	53	202.36	220.99

The means range from a high of 320.94 for NDSL to a low of 87.26 for ISE. The standard deviations range from a high of 220.99 for IGS to a low of 104.91 for EOG.

Hypothesis Two was rejected for variables EOG, NDSL, ISE, GSL/FISL, and IGS. The CWSP variable in this hypothesis was not significant.

The CWSP variable was not significant with the one-way analysis of variance in the comparison of universities and four-year colleges. The analysis of variance data is presented in Table 12.

TABLE 12

Analysis of Variance of CWSP for the Average Amount of Assistance per Aid Applicant at Universities and Four-year Colleges

SOURCE	DF	SS	MS	F
Between	1	32722.17	32722.17	1.41*
Within	129	2994152.61	23210.49	
Total	130	3026874.79		

* $p > .05$, $F_t (.05, 1, 129) = 3.84$

The EOG variable was significant with the one-way analysis of variance in the comparison of universities and four-year colleges. The analysis of variance data is presented in Table 13.

TABLE 13

Analysis of Variance of EOG for the Average Amount of Assistance per Aid Applicant at Universities and Four-year Colleges

SOURCE	DF	SS	MS	F
Between	1	113970.16	113970.16	11.97*
Within	129	1228496.78	9523.23	
Total	130	1342466.94		

* $p \leq .05$, $F_t (.05, 1, 129) = 3.84$

The Duncan's Multiple Range Test (34.39) indicated that the universities had a higher average amount of assistance per aid applicant (168.95) than did the four-year colleges (108.85).

The NDSL variable was significant with the one-way analysis of variance in the comparison of universities and four-year colleges. The analysis of variance data is presented in Table 14.

TABLE 14

Analysis of Variance of NDSL for the Average Amount of Assistance per Aid Applicant at Universities and Four-year Colleges

SOURCE	DF	SS	MS	F
Between	1	1267602.87	1267602.87	57.31*
Within	129	2853404.65	22119.42	
Total	130	4121007.53		

* $p \leq .05$, $F_t (.05, 1, 129) = 3.84$

The Duncan's Multiple Range Test (52.42) indicated that the universities had a higher average amount of assistance per aid applicant (320.94) than did the four-year colleges (120.52).

The ISE variable was significant with the one-way analysis of variance in the comparison of universities and four-year colleges. The analysis of variance data is presented in Table 15.

TABLE 15

Analysis of Variance of ISE for the Average Amount of Assistance per Aid Applicant at Universities and Four-year Colleges

SOURCE	DF	SS	MS	F
Between	1	119569.29	119569.29	20.98*
Within	129	735239.97	5699.53	
Total	130	854809.26		

* $p \leq .05$, $F_t (.05, 1, 129) = 3.84$

The Duncan's Multiple Range Test (26.61) indicated that the universities had a higher average amount of assistance per aid applicant (87.26) than did the four-year colleges (25.70).

The GSL/FISL variable was significant with the one-way analysis of variance in the comparison of universities and four-year colleges. The analysis of variance data is presented in Table 16.

TABLE 16

Analysis of Variance of GSL/FISL for the Average Amount
of Assistance per Aid Applicant at Universities
and Four-year Colleges

SOURCE	DF	SS	MS	F
Between	1	240442.09	240442.09	13.19*
Within	129	2350728.06	18222.70	
Total	130	2591170.15		

* $p \leq .05$, $F_t (.05, 1, 129) = 3.84$

The Duncan's Multiple Range Test (47.58) indicated that the universities had a higher average amount of assistance per aid applicant (175.58) than did the four-year colleges (88.30).

The IGS variable was significant with the one-way analysis of variance in the comparison of universities and four-year colleges. The analysis of variance data is presented in Table 17.

TABLE 17

Analysis of Variance of IGS for the Average Amount of Assistance per Aid Applicant at Universities and Four-year Colleges

SOURCE		SS	MS	F
Between	1	564036.48	564036.48	22.07*
Within	129	3296292.82	25552.66	
Total	130	3860329.30		

* $p \leq .05$, $F_t (.05, 1, 129) = 3.84$

The Duncan's Multiple Range Test (56.34) indicated that the universities had a higher average amount of assistance per aid applicant (202.36) than did the four-year colleges (68.67).

Hypothesis Three stated that there will be no significant difference between the average amount of assistance per aid applicant at universities and two-year colleges. The descriptive analysis of this hypothesis is found in Table 18 for universities and Table 19 for two-year colleges.

TABLE 18

Means and Standard Deviations of the Average Amount of Assistance per Aid Applicant at Universities

KINDS OF ASSISTANCE	NUMBER	MEAN	SD
CWSP	78	266.42	142.90
EOG	78	108.85	92.32
NDSL	78	120.52	134.44
ISE	78	25.70	34.83
GSL/FISL	78	88.30	103.75
IGS	78	68.67	99.14

The means range from a high of 266.42 for CWSP to a low of 25.70 for ISE. The standard deviations range from a high of 142.90 for CWSP to a low of 34.83 for ISE.

TABLE 19

Means and Standard Deviations for the Average Amount of Assistance per Aid Applicant at Two-year Colleges

KINDS OF ASSISTANCE	NUMBER	MEAN	SD
CWSP	82	180.91	160.67
EOG	82	94.26	78.71
NDSL	82	257.74	228.91
ISE	82	132.25	385.59
GSL/FISL	82	283.47	298.62
IGS	82	162.72	329.94

The means range from a high of 283.47 for GSL/FISL to a low of 94.26 for EOG. The standard deviations range from a high of 385.59 for ISE to a low of 78.71 for EOG.

Hypothesis Three was rejected for variables CWSP, NDSL, ISE, GSL/FISL, and ISG. The EOG variable in this hypothesis was not significant.

The CWSP variable was significant with the one-way analysis of variance in the comparison of universities and two-year colleges. The analysis of variance data is presented in Table 20.

TABLE 20

Analysis of Variance of CWSP for the Average Amount
of Assistance per Aid Applicant at Universities
and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	292282.77	292282.77	12.61*
Within	158	3663390.71	23186.02	
Total	159	3955673.48		

* $p \leq .05$, $F_t (.05, 1, 158) = 3.84$

The Duncan's Multiple Range Test (47.21) indicated that the universities (266.42) had a higher average amount of assistance per aid applicant than did the two-year colleges average amount of assistance per aid applicant (180.91).

The EOG variable was not significant with the one-way analysis of variance in comparison of universities and two-year colleges. The analysis of variance data is presented in Table 21.

TABLE 21

Analysis of Variance of EOG for the Average Amount of
Assistance per Aid Applicant at Universities and Two-
year Colleges

SOURCE	DF	SS	MS	F
Between	1	8515.07	8515.07	1.16*
Within	158	1157979.44	7328.99	
Total	159	1166494.50		

* $p > .05$, $F_t (.05, 1, 158) = 3.84$

The NDSL variable was significant with the one-way analysis of variance in the comparison of universities and two-year colleges. The analysis of variance data is presented in Table 22.

TABLE 22

Analysis of Variance of NDSL for the Average Amount of Assistance per Aid Applicant at Universities and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	752699.72	752699.72	21.10*
Within	158	5636016.07	35670.99	
Total	159	6388715.79		

* $p \leq .05$, $F_t (.05, 1, 158) = 3.84$

The Duncan's Multiple Range Test (58.55) indicated that the universities (257.74) had a higher average amount of assistance per aid applicant than did the two-year colleges (120.52).

The ISE variable was significant with the one-way analysis of variance in the comparison of universities and two-year colleges. The analysis of variance data is presented in Table 23.

TABLE 23

Analysis of Variance of ISE for the Average Amount of Assistance per Aid Applicant at Universities and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	435840.00	435840.00	5.91*
Within	158	12136511.23	76813.36	
Total	159	12590351.23		

* $p \leq .05$, $F_t (.05, 1, 158) = 3.84$

The Duncan's Multiple Range Test (85.92) indicated that the universities (132.25) had a higher average amount of assistance per aid applicant than did the two-year colleges (25.70).

The GSL/FISL was significant with the one-way analysis of variance in the comparison of universities and two-year colleges. The analysis of variance data is presented in Table 24.

TABLE 24

Analysis of Variance of GSL/FISL for the Average Amount of Assistance per Aid Applicant at Universities and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	1522693.60	1522693.60	29.88*
Within	158	8051947.41	50961.69	
Total	159	9574641.01		

* $p \leq .05$, $F_t (.05, 1, 158) = 3.84$

The Duncan's Multiple Range Test (69.99) indicated that the universities (283.47) had a higher average amount of assistance per aid applicant than did the two-year colleges (88.30).

The IGS was significant with the one-way analysis of variance in the comparison of universities and two-year colleges. The analysis of variance data is presented in Table 25.

TABLE 25

Analysis of Variance of IGS for the Average Amount of Assistance per Aid Applicant at Universities and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	353573.15	353573.15	5.85*
Within	158	9574564.37	60598.51	
Total	159	9928137.52		

* $p \leq .05$, $F_t (.05, 1, 158) = 3.84$

The Duncan's Multiple Range Test (76.32) indicated that the universities (162.72) had a higher average amount of assistance per aid applicant than did the two-year colleges (68.67).

Hypothesis Four stated that there will be no significant difference between the average amount of assistance per aid applicant at four-year and two-year colleges. The descriptive analysis of this hypothesis is found in Table 26 for four-year and in Table 27 for two-year colleges.

TABLE 26

Means and Standard Deviations of the Average Amount of Assistance per Aid Applicant at Four-year Colleges

KINDS OF ASSISTANCE	NUMBER	MEAN	SD
CWSP	53	234.22	165.36
EOG	53	168.95	104.91
NDSL	53	320.94	167.66
ISE	53	87.26	111.10
GSL/FISL	53	175.58	171.08
IGS	53	202.36	220.99

The means range from a high of 320.94 for NDSL to a low of 87.26 for ISE. The standard deviations range from a high of 220.99 for IGS to a low of 104.91 for EOG.

TABLE 27

Means and Standard Deviations of the Average Amount of Assistance per Aid Applicant at Two-year Colleges

KINDS OF ASSISTANCE	NUMBER	MEAN	SD
CWSP	82	180.91	160.67
EOG	82	94.26	78.71
NDSL	82	257.74	228.91
ISE	82	132.25	385.59
GSL/FISL	82	283.47	298.62
IGS	82	162.72	329.94

The means range from a high of 283.47 for GSL/FISL to a low of 94.26 for EOG. The standard deviation's range from a high of 385.59 for ISE to a low of 78.71 for EOG.

Hypothesis Four was rejected for variable EOG and GSL/FISL at the .05 level. All other variables in this hypothesis were not significant.

The CWSP variable was not significant with the one-way analysis of variance in the comparison of four-year colleges and two-year colleges. The analysis of variance data is presented in Table 28.

TABLE 28

Analysis of Variance of CWSP for the Average Amount of Assistance per Aid Applicant at Four-year and Two-year colleges

SOURCE	DF	SS	MS	F
Between	1	91479.52	91479.52	3.4634*
Within	133	3512982.24	26413.40	
Total	134	3604461.77		

* $p > .05$, $F_t (.05, 1, 133) = 3.84$

The EOG variable was significant with the one-way analysis of variance in comparison of four- to two-year colleges. The analysis of variance data is presented in Table 29.

TABLE 29

Analysis of Variance of EOG for the Average Amount of Assistance per Aid Applicant at Four-year and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	179593.86	179593.86	22.24*
Within	133	1074036.89	8075.47	
Total	134	1253630.75		

* $p \leq .05$, F_t (.05, 1, 133) = 3.84

The Duncan's Multiple Range Test (31.36) indicated that the four-year college had a higher average amount of assistance per aid applicant (168.95) than did the two-year colleges average amount of assistance per aid applicant (94.26).

The NDSL variable was not significant with the one-way analysis of variance in the comparison of four-year colleges and two-year colleges. The analysis of variance data is presented in Table 30.

TABLE 30

Analysis of Variance of NDSL for the Average Amount of Assistance per aid Applicant at Four-year and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	128587.74	128587.74	3.00*
Within	133	5706075.64	42902.82	
Total	134	5834663.39		

* $p > .05$, F_t (.05, 1, 133) = 3.84

The ISE variable was not significant with the one-way analysis of variance in the comparison of four-year colleges and two-year colleges. The analysis of variance data is presented in Table 31.

TABLE 31

Analysis of Variance of ISE for the Average Amount of Assistance per Aid Applicant at Four-year and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	65179.41	65179.41	0.68*
Within	133	12684939.06	95375.48	
Total	134	12750118.47		

* $p > .05$, $F_t (.05, 1, 133) = 3.84$

The GSL/FISL variable was significant with the one-way analysis of variance in the comparison of four-year colleges and two-year colleges. The analysis of variance data is presented in Table 32.

TABLE 32

Analysis of Variance of GSL/FISL for the Average Amount of Assistance per Aid Applicant at Four-year and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	374669.53	374669.53	5.70*
Within	133	8744997.84	65751.86	
Total	134	9119667.37		

* $p \leq .05$, $F_t (.05, 1, 133) = 3.84$

The Duncan's Multiple Range Test (89.48) indicated that the four-year colleges (283.47) had a higher average amount of assistance per aid applicant than did the two-year colleges (175.58).

The IGS variable was not significant with the one-way analysis of variance in the comparison of four-year colleges and two-year colleges. The analysis of variance data is presented in Table 33.

TABLE 33

Analysis of Variance of IGS for the Average Amount
of Assistance per Aid Applicant at Four-year
and Two-year Colleges

SOURCE	DF	SS	MS	F
Between	1	50596.58	50596.58	0.59*
Within	133	11357089.44	85391.65	
Total	134	11407686.01		

* $p > .05$, $F_t (.05, 1, 133) = 3.84$

All hypotheses were rejected in part for the variables of the data. Fifteen variables, of the twenty-four possible, on the four hypotheses were found significant at the .05 level

Model Data and Analysis

A student financial aid utilization model was derived from the data reported by institutions of postsecondary education in the Southwest. The model reflected the direct proportionality of student financial aid and the size of the institution to determine its student financial aid utilization status.

The prediction model was calculated from the sample data using the number of aid applicants for each institution as the independent variable and the average amount of a particular kind of student aid utilized by each institution as the dependent variable. The model was formed by using linear regression analysis on the data in the sample.

This prediction model utilized the general formula $y = kx + C$ where the y variable represents a particular kind of student aid while the x variable represents the size of the institution. The constants k and C were necessary to allow the model to predict the dependent variable (y) as values are given to the independent variable (x).

In a comparison of a subgroup of the data and enrollment by type, control, and size of institution eighty one predictive models were generated in these sub group classifications. The enrollment was classified as small, medium and large where the number of institutions allowed a three-way break down for enrollment.

The public two-year large college enrollment (3,010 to 19,800) yielded a predictive model of $y = .0282x + 1.9011$ with a regression of .6436, an F ratio value of 6.3650 significance at the .05 level for the ISE kind of assistance. The number of institutions in this model was 11.

The public four-year medium college enrollment (2,234 to 4,120) yielded a prediction model of $y = .0378x + 21.5235$ with a regression of .8141, an F ratio value of 9.8272 significance at the .05 level for the GSL/FISL kind of assistance. The number of institutions in this model was 7.

The public four-year small college enrollment (85 to 864) yielded a prediction model of $y = .3746x + 138.2914$ with a regression of .4528, an F ratio value of 5.9313 significance at the .05 level for the CWSP kind of assistance. The number of institutions in this model was 25.

The private four-year medium college enrollment (1,025 to 1,872) yielded a prediction model of $y = .3055x - 24.4117$ with a regression

of .7615, an F ratio value of 17.9489 significance at the .05 level for the CWSP kind of assistance. The number of institutions in this model was 15.

In consideration of the small number of models, (four) found significant out of the eighty-one that were possible, it was decided not to accept this classification as the best possible operational design. The failure of this design was due to the small number of institutions that appeared in most of the subgroup classifications. It was therefore decided to use only type and control for the prediction models. This technique yielded the best operational design that was possible for the data of the study.

The table of prediction models was used to present the results of the analysis. The table contains the classifications used to determine each model. This classification was control, type, and kind of assistance. The prediction model is then listed according to the classification with the regression coefficient, F ratio value, and significance level. The regression coefficient was used to determine the relationship between the independent variable and the dependent variable. The F ratio value is used to determine the significance of the model, while the significance level reports the degrees of significance. Thirty-six models were generated according to the various subgroup classifications. The thirty-six models are listed with their corresponding levels of significance in Table 34.

TABLE 34

CONTROL	TYPE	KINDS OF ASSISTANCE	MODEL	REGRESSION	F	SL
Public	2 year	CWSP	$y = -.0086x + 185.6518$	-.2068	2.4133	$p \leq .25$
		EOG	$y = -.0024x + 82.6701$	-.1062	.6157	ns
		NDSL	$y = -.0242x + 267.2656$	-.2955	5.1652	$p \leq .05$
		ISE	$y = -.0205x + 191.1320$	-.1125	.6919	ns
		GSL/FISL	$y = -.0109x + 338.8885$	-.0819	.3650	ns
		IGS	$y = -.0048x + 39.7320$	-.2171	2.6704	$p \leq .25$
Public	4 year	CWSP	$y = -.0131x + 260.6025$	-.1023	.1164	ns
		EOG	$y = -.0010x + 132.9339$	-.0132	.0019	ns
		NDSL	$y = -.0460x + 288.2178$	-.3417	1.4543	$p \leq .25$
		ISE	$y = -.0266x + 66.8141$	-.3335	1.3769	$p \leq .25$
		GSL/FISL	$y = -.0378x + 21.9907$	-.7376	13.1234	$p \leq .25$
		IGS	$y = -.0058x + 74.3515$	-.0592	.0387	ns
Public University		CWSP	$y = -.0920x + 298.0593$	-.2450	4.1401	$p \leq .05$
		EOG	$y = -.0021x + 96.0154$	-.0107	.0075	ns
		NDSL	$y = -.0152x + 105.5782$	-.0500	.1628	ns
		ISE	$y = -.0030x + 22.5946$	-.0335	.0731	ns
		GSL/FISL	$y = -.0141x + 93.9143$	-.0521	.1766	ns
		IGS	$y = -.0324x + 64.8554$	-.1591	1.6881	$p \leq .25$
Private 2 year		CWSP	$y = -.0584x + 269.6784$	-.2745	1.9553	$p \leq .25$
		EOG	$y = -.0127x + 143.1605$	-.1377	.4638	ns
		NDSL	$y = -.0294x + 376.9521$	-.1320	.4254	ns
		ISE	$y = -.0160x + 114.4703$	-.1390	.4731	ns
		GD/FISL	$y = -.0220x + 190.7087$	-.1342	.4402	ns
		IGS	$y = -.0399x + 446.9184$	-.0894	.1934	ns

CONTROL	TYPE	KINDS OF ASSISTANCE	MODEL	REGRESSION	F	SL
Private	4 year	CWSP	$y = -.2067x + 133.6320$	-.3732	6.1491	p \leq .05
		EOG	$y = -.0938x + 140.8162$	-.2681	2.9435	p \leq .10
		NDSL	$y = -.0795x + 310.0646$	-.1460	.8275	ns
		ISE	$y = -.0209x + 110.0652$	-.0567	.1224	ns
		GSL/FISL	$y = -.0495x + 194.0415$	-.0888	.3021	ns
		IGS	$y = -.1766x + 321.0900$	-.2413	2.3488	p \leq .25
Private University		CWSP	$y = -.0367x + 260.1140$	-.0294	.0078	ns
		EOG	$y = -.2937x + 245.7269$	-.2332	.5177	ns
		NDSL	$y = -.7829x + 388.3263$	-.5265	3.3615	p \leq .10
		ISE	$y = -.0069x + 39.6907$	-.0201	.0036	ns
		GSL/FISL	$y = -.1185x + 61.6893$	-.1240	.1405	ns
		IGS	$y = -.7696x + 302.2574$	-.5611	4.1348	p \leq .10

The thirty-six variable sub-groups were calculated for regression significance at various levels to indicate the value of the prediction model. There were four models significant at the .05 level. These models were: public two-year colleges on NDSL, public four-year colleges on GSL/FISL, public universities on CWSP, and private four year colleges on CWSP. There were three models significant at the .10 level. These models were: private four-year colleges on EOG, private universities on NDSL and IGS. There were seven models significant at the .25 level. These models were: public two-year on CWSP and IGS, public four-year on NDSL and ISE, public universities on IGS, private two-year colleges on CWSP, and private four year colleges on IGS. There were twenty-two models found not to be significant ($p \leq .75$) out of the total of thirty-six.

Analysis of Telephone Interview Questionnaire

A Telephone Interview Questionnaire (Appendix A) was used to determine an attitude rating scale of high to low for the following questions:

1. The experience of the student financial aid officer -
2. The size of the student financial aid staff -
3. The institutional commitment to the student financial aid programs -
4. The professional development of the financial aid officer -
5. The access the director of student financial aid has to key administrative personnel -
6. The institution's student financial aid budget used in determining a student's financial need -

7. The centralization of the administration of all student financial aid programs -
8. The direct support from the president of the institution -
9. The direct support from the business manager of the institution -

The sample consisted of five institutions selected from the classification of high to low utilization, public to private and universities, four-year colleges and two-year colleges. Frequencies are reported in Table 35 for each of the institutional classifications.

Table 35 is organized by the classifications of high to low utilization, public to private, and by universities, four-year and two-year colleges. The responses are listed under each question according to the one to five attitude rating scale.

Chi Square analysis was used to determine the level of significance for each of the institutional classifications. This analysis indicated conclusively that there is no difference in the attitude rating between the high to low utilization, public to private control or universities, four-year and two-year colleges.

There was no significant difference in the attitude ratings of the institutions over the classifications. All institutional student financial aid officers rated the questions average to high on the factors that may influence an institution's utilization of student financial aid funds. As Table 35 indicates very few of the student financial aid officers rated the nine questions in the low range.

TABLE 35

FREQUENCY RESPONSES FOR THE TELEPHONE INTERVIEW
QUESTIONNAIRE BY TYPE AND CONTROL OF INSTITUTION

	Rat- ing Scale	Responses To Questions								
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
Pub. Univ. High Utilization	1	0	0	0	0	1	1	0	0	0
	2	1	1	0	0	2	1	1	2	1
	3	1	1	2	3	1	1	0	2	1
	4	0	2	2	1	0	0	1	0	0
	5	3	1	1	1	1	2	3	1	3
Pub. Univ. Low Utilization	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	2	2	1	1	1	0	0	0
	4	1	0	0	2	1	2	1	0	1
	5	4	3	3	2	3	2	4	5	4
Priv. Univ. High Utilization	1	0	0	0	0	0	1	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	2	0	1	0	1	0	1	0
	4	1	1	1	0	2	1	2	1	1
	5	4	2	4	4	3	2	3	3	4
Priv. Univ. Low Utilization	1	0	0	0	0	0	0	0	0	0
	2	0	1	0	0	2	0	0	0	1
	3	1	2	0	1	0	1	0	0	0
	4	2	1	2	1	1	2	2	3	0
	5	2	1	3	3	2	2	3	2	4
Pub. 4 Yr. High Utilization	1	0	0	0	0	0	0	0	0	0
	2	1	1	0	0	0	0	0	0	0
	3	0	0	0	1	0	2	2	0	0
	4	2	1	2	3	1	2	0	0	1
	5	2	3	3	1	4	1	3	5	4
Pub. 4 Yr. Low Utilization	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	1	0	0	1	0	0	0	0
	4	2	2	1	2	1	2	0	1	1
	5	3	2	4	3	3	3	5	4	4
Private 4 Yr. High Utilization	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	1	0	0	0
	3	1	1	1	2	2	0	0	0	0
	4	0	3	2	1	2	2	2	2	1
	5	4	1	2	2	1	2	3	3	4

TABLE 35 (continued)

	Rat- ing Scale	Responses To Questions								
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
Private 4 Yr.	1	0	0	0	0	0	0	0	0	0
Low	2	0	1	0	0	1	0	0	1	0
Utilization	3	0	2	0	2	1	0	0	0	0
	4	1	2	3	0	2	3	1	0	0
	5	4	0	2	3	1	2	4	4	5
Pub. 2 Yr.	1	0	0	0	0	0	0	0	0	0
Low	2	0	0	0	0	0	0	0	0	1
Utilization	3	0	1	0	1	0	1	2	0	0
	4	3	3	3	2	3	3	0	2	1
	5	2	0	2	2	2	1	3	2	3
Private 2 Yr.	1	0	0	0	0	0	0	0	0	0
High	2	0	2	0	0	0	0	0	0	0
Utilization	3	1	2	1	0	2	0	0	1	0
	4	3	0	0	3	1	3	1	1	0
	5	1	1	4	2	2	2	4	3	5
Private 2 Yr.	1	0	0	0	0	0	0	0	0	0
Low	2	1	0	0	0	0	0	0	0	0
Utilization	3	0	4	0	0	0	1	0	0	0
	4	1	1	4	0	2	2	0	3	1
	5	3	0	1	5	3	2	5	2	4

Summary

A descriptive and inferential analysis was conducted to accept or reject the stated hypotheses. Hypothesis One was based on a comparison of public to private institutions. The kinds of aid found to be significant were: EOG, NDSL, and IGS. Hypothesis Two was based on a comparison of universities to four-year colleges. The kinds of aid found to be significant were: EOG, NDSL, ISE, GSL/FISL, and IGS. Hypothesis Three was based on a comparison of universities to two-year colleges. The kinds of aid found to be significant were: CWSP, NDSL, ISE, GSL/FISL, and IGS. The Fourth Hypothesis was based on a comparison of four-year colleges to two-year colleges. The kinds of aid found to be significant were: EOG and GSL/FISL.

The regression analysis for the prediction models generated was used to compare kinds of student aid and the size of institution. The four models that were significant at the .05 level were: public two-year colleges on NDSL, public four-year colleges on GSL/FISL, public universities on CWSP, and private four-year colleges on CWSP.

The Chi Square analysis of the telephone interview questionnaire was not significant on any institutional classifications. There was no significant difference in how the student financial aid officers viewed the factors that may influence an institution's utilization of funds.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to provide useful data to assist program officers in their work with colleges and universities in the States of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. In order to accomplish this task it was necessary to ascertain what relationship size, type, and control may exert on the amount of utilization of student financial aid funds at institutions of higher education in the Southwest and to develop a student financial aid utilization model.

The review of the literature was reported in two sections, historical background and current studies. From the earliest founding of colleges, student aid has played an important role in the development of American higher education. As the nature of the American college developed and changed so did the nature of student aid. Before the Civil War, American Colleges were predominately private, as were the sources of student aid. Between the Civil War and World War II low-cost, state supported, land-grant institutions began to compete with the private colleges for students. During this period, the student loan became an acceptable student aid.

Since the end of World War II, both American higher education and student aid have experienced remarkable growth and diversification. It was during this period that the federal government became involved in student financial programs on the largest scale.

The current research was reviewed within the general topic of Student Financial Aid Administration. Studies dealing with the student financial aid officer, student aid administration and student aid programs were reviewed within the general topic: "Administration of Student Financial Aid." The financial aid officer generally holds a master's degree; has had no formal training for his job; administratively sees himself on an equal basis with the registrar or director of admissions, although he is generally paid less. Most writers concur that the student aid profession is in the state of becoming. Most studies agree that, given time, this profession will be an important influence in American higher education.

It was the conclusion of several of the studies that for the most part, the federal student aid programs were being utilized to meet their intended purpose. These programs were enabling needy students to attend college.

The sample for this study consisted of 213 institutions of postsecondary education in the Southwest that participated in one or more of the Federal Student Financial Aid Programs in Fiscal Year 1973. The data, secured from the Dallas Regional Office of Education, was grouped by type and control institutions. Each of six kinds of student aid was divided by the size of institution to determine the average amount of assistance per aid applicant. Each of four hypothesis was

tested for comparisons, using the analysis of variance and Duncan's Multiple Range Test at the .05 level of significance.

Student financial aid utilization models were derived from the data reported by institutions of postsecondary education in the Southwest. The prediction models were calculated from the sample data, using the number of aid applicants for each institution as the independent variable, and the average amount of a particular kind of student aid utilized by each institution as the dependent variable. The models were formed by using linear regression analysis on the data in the sample.

A descriptive and inferential analysis was conducted to accept or reject the hypotheses stated below:

Hypothesis One stated that there will be no significant difference between the average amount of assistance per aid applicant at publicly-controlled and privately-controlled institutions.

Hypothesis Two stated that there will be no significant difference between the average amount of assistance per aid applicant at universities and four year colleges.

Hypothesis Three stated that there will be no significant difference between the average amount of assistance per aid applicant at universities and two-year colleges.

Hypothesis Four stated that there will be no significant difference between the average amount of assistance per aid applicant at four-year colleges and two-year colleges.

All hypotheses were rejected in part, for the variables of the data. Fifteen variables of the twenty-four possible, on the four hypothesis were found significant at the .05 level.

Thirty-six student aid utilization prediction models were generated according to the various subgroup classifications. The thirty-six variable subgroups were calculated for regression significance at various levels to determine the value of the prediction model. Fourteen of the thirty-six subgroup variables were found to be significant at one of the various levels of significance.

The Chi Square analysis of the telephone interview questionnaire was not significant for the classifications of high to low utilization, public to private, and by universities, four year and two year colleges. There was no significant difference in how the student financial aid officers viewed the factors that may influence an institution's utilization of funds.

Findings

Various findings were indicated in the statistical analysis of the data. These findings are stated as follows:

There was a significant difference between the average amount of assistance per aid applicant at publicly-controlled and privately controlled institutions for the variables EOG, NDSL and IGS. The privately controlled institutions scored higher than did the publicly controlled institutions in the average amount of assistance utilized per aid applicant for the variables EOG, NDSL and IGS.

There was a significant difference between the average amount of assistance per aid applicant at universities and four-year colleges for the variables EOG, NDSL, ISE, GSL/FISL and IGS. For these variables the universities scored higher than did the four-year colleges in the average amount of assistance utilized per aid applicant.

There was a significant difference between the average amount of assistance per aid applicant at universities and two-year colleges for the variables CWSP, NDSL, ISE, GSL/FISL, IGS. For these variables the universities scored higher than did the two-year colleges in the average amount of assistance utilized per aid applicant.

There was a significant difference between the average amount of assistance per aid applicant at four-year colleges and two-year colleges for the variables EOG and GSL/FISL. For these variables the four-year colleges scored higher than did the two-year colleges in the average amount of assistance utilized per aid applicant.

There were four student aid utilization models that were significant in the comparison of size of institutions to the average amount of student aid. The type and control of institutions whose models were significant are: public two-year colleges on NDSL, public four-year colleges on GSL/FISL, public universities on CWSP, and private four-year colleges on CWSP.

For the most part, the student financial aid officers of the sample institutions rated the nine questions of the telephone interview questionnaire as all being important factors which may influence the utilization of student financial aid funds. The ratings were consistent without regard to type, control, or size of institution.

Discussion of the Findings

It was hypothesized that there would be no statistical difference in the average amount of assistance per aid applicant at publicly controlled institutions and privately controlled institutions. The

findings in this study indicated that indeed there was a significant difference between publicly and privately controlled institutions and that the amount of aid per applicant was significantly higher for the privately controlled institutions for the student aid variables EOG, NDSL, and IGS. It is reasonable to assume that higher total costs per student and, typically, more endowment funds at privately controlled institutions were factors in the utilization of more aid per student applicant.

Although universities were found to have a significantly higher average amount of assistance per aid applicant than either four-year or two-year colleges for the EOG, NDSL, ISE, GSL/FISL, IGS and CWSP, NDSL, ISE, GSL/FISL, and IGS student aid variables respectively, different factors influenced the respective comparisons. It may be assumed that total cost of education was a factor in both comparisons but in different ways. In the comparison between the universities and the four-year colleges, the typically higher cost per student at the universities could account for the higher average amount of aid. On the other hand, the typically low cost of the two-year colleges has limited the amounts of aid available. Another factor which may have influenced the findings is the fact that universities generally have larger, administratively capable staffs who can administer larger amounts of funds than can the four-year and two-year college smaller, yet administratively capable, staffs.

The findings of this study further revealed a significant difference between the four-year and the two-year colleges in terms of the average amount of assistance per aid applicant for the variables EOG and GSL/FISL. Factors related to these findings include total

cost per student and the relative amounts of student financial aid available at the respective types of institutions. Four-year colleges typically have larger, more experienced student financial aid staffs capable of administering larger amounts of funds than do the two-year colleges.

Four student financial aid utilization prediction models were calculated from the sample data. Using the appropriate model, an institution of similar control and type can determine how its utilization of a particular kind of aid compares to the regional average. The resulting comparison should provide the institution with sound data to assist making more objective decisions.

Conclusions

Various conclusions were indicated as the result of the statistical analysis of the data. These conclusions are stated as follows:

The average amount of student financial aid per aid applicant was greater at Privately controlled institutions of higher education than at Publicly controlled institutions of higher education in the Southwest.

The study revealed that universities provided higher amounts of student financial aid per aid applicant than did four year colleges.

The average amount of student financial aid per aid applicant was greater at four year colleges than it was at two year colleges.

Universities provided a larger average amount of student financial aid per aid applicant than did two year colleges.

The value of the student financial aid utilization model will increase provided a larger data base is considered.

Recommendations

As the result of the summary and conclusions presented, the following recommendations are made. They are listed in no special order.

It is recommended that postsecondary institutions attempt to systematically determine the financial needs of their students. This would include an examination of the actual costs a typical student incurs during an academic year and the use of an appropriate needs analysis system, or systems, for the type of student at a particular institution.

Once the amount of student financial need is determined, it is recommended that each institution develop a rationale for the amount, kind, and source of student financial aid that should be utilized, if any. The institution should consider federal, state, and local sources, as well as what amount of institutional funds may be required for participation in the various programs.

If the institution chooses to have a student financial aid program, then it is recommended that a student financial aid staff be employed. The size of the staff would depend on the size of the aid program. However, the person designated as the director should have had as much experience as possible.

In conjunction with the previous recommendation, it should be recommended that all kinds of student financial aid be administered through one office. This provides better total utilization of funds and consistent consideration of aid applicants.

It is further recommended that the U.S. Office of Education develop alternative state funding formulas for the allocation of the federal student financial aid programs. The Office of Education should also consider what roles the regional offices might play in redistributing the federal student aid program funds within a state or the geographical area served.

It is recommended that more consistent funding patterns be established by the U.S. Congress and that the notification of allocations be established so as to facilitate the awarding and, ultimately, better utilization of funds.

In order to make more realistic decisions it is recommended that additional research dealing with student financial aid administration be encouraged. Private, professional, and governmental resources should all be considered in supporting the effort.

A replication of the telephone interview questionnaire should be conducted requesting the respondents to rate factors influencing the utilization of student financial aid funds specifically at their institution. The results could then be related to the findings of this study for a comparison analysis of the factors which influence an institution's utilization of student financial aid funds.

Need for Further Research

The findings and recommendations of this study suggest several areas for further research. They are listed in no special order.

The regional office of the U.S. Office of Education should be able to provide institutions of postsecondary education with information, data and technical assistance concerning the administration of their student financial aid programs. This service should provide institutions with the kind of information which could be used in the preparation of the requests for funding.

There is a need for an institution to be able to determine factors which affect the utilization of student aid funds. A procedure for making such a determination should be developed.

A definite need exists for the training of student financial aid personnel. Who should provide the training and the accessibility of such training must also be determined.

The replication of this study should contain controls for other variables, such as other kinds of student assistance and other types of institutions. Longitudinal studies could provide additional data in determining trends of student financial aid utilization.

In order to provide institutions with additional student financial aid utilization prediction models this study needs to be conducted using larger samples. Perhaps two or more federal regions or a national sample would be an appropriate data base.

APPENDIX A

<u>NAME OF INSTITUTION</u>	<u>High or Low Utilization</u>	<u>TYPE</u>	<u>CONTROL</u>
On a Scale of 1 to 5, five being the highest, how would you rate the following factors in terms of those which may influence an institution's utilization of SFA funds.			
1. The experience of the student financial aid officer -			1 2 3 4 5
2. The size of the student financial aid staff -			1 2 3 4 5
3. The institutional commitment to the student financial aid programs -			1 2 3 4 5
4. The professional development of the financial aid officer -			1 2 3 4 5
5. The access the Director of Student Financial Aid has to key administrative personnel -			1 2 3 4 5
6. The amount of the institution's student financial aid budget -			1 2 3 4 5
7. The centralization of the Administration of all student financial aid programs -			1 2 3 4 5
8. The direct support from the President of the institution			1 2 3 4 5
9. The direct support from the Business Manager of the institution			1 2 3 4 5

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