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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

# CHARACTERISTICS OF SCHOLARSHIP RECIPIENTS AT THE UNIVERSITY OF OKLAHOMA

A DISSERTATION

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CHARACTERISTICS OF SCHOLARSHIP RECIPIENTS

AT THE UNIVERSITY OF OKLAHOMA

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# CHARACTERISTICS OF SCHOLARSHIP RECIPIENTS AT THE UNIVERSITY OF OKLAHOMA

## CHAPTER I

## THE PROBLEM

### Need for the Study

For many years the University of Oklahoma has granted scholarships to students whose records indicated that they had a good chance for academic success and who showed a need for financial assistance to enable them to attend the University. A recent investigation by one member of the scholarship committee of the University pointed out that "when we considered the fact that we attempt to select only the better qualified students to receive scholarships, it seems as though an extremely high percentage do not persevere to graduation."[1]

It was felt that a study of the characteristics possessed by scholarship recipients who persisted to graduation, compared to those recipients who did not graduate, was in order. Such a study would be useful in helping

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[1]Interview with Guy H. Brown, Director of Alumni Relations, University of Oklahoma, May 5, 1961.

to determine the types of individuals who would be most apt to receive the greatest educational benefit from financial assistance.

Good[1] defines scholarship as: "An award, usually of money or free tuition, given to a deserving student, either as recognition of achievement or encouragement." Feingold[2] divided scholarships into three main categories: general, regional, and special. "General scholarships are those for which any deserving and needy student may compete regardless of residence, religion, or contemplated course of study. The stated basis of consideration is often high academic achievement, stability of character, originality of purpose, leadership qualities, and, almost always, financial need." The general scholarship is the type with which this study is concerned.

A Scholarship Committee is defined by Good[3] as: "A group of members of the instructional and administrative staffs whose duty is to review the scholastic records and sometimes the financial need of students to whom honors, prizes, and money may be awarded." The Scholarship Committee at the University of Oklahoma in granting general scholarships "operates with a policy of selecting only applicants

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[1]Carter V. Good (ed.), Dictionary of Education (New York: McGraw-Hill Book Co., Inc., 1945), p. 357.

[2]S. Norman Feingold, Scholarships, Fellowships and Loans (Boston: Bellman Publishing Co., Inc., 1949), p. 8.

[3]Good, loc. cit.

who demonstrate financial need and the academic ability necessary to profit from college experiences."[1] It was in the hope that some assistance might be afforded the Scholarship Committee of the University of Oklahoma, as well as other institutions of higher learning which may have similar problems, that this study was undertaken.

## Statement of the Problem

The problem of this study was to determine what characteristics differentiate those scholarship recipients at the University of Oklahoma who persist to graduation from those who do not.

## Delimitation of the Problem

The study was limited to recipients of University of Oklahoma scholarships who were beginning freshmen during the fall semesters of the school years 1955-56 and 1956-57. It was further limited to include only those students whose records at the University of Oklahoma included the Ohio State Psychological Examination and the Iowa High School Content test results and an application for a University of Oklahoma scholarship.

The study also was limited in that items subject to change, i.e., marital status, family income, car ownership, occupation of parents, and per cent of expenses to be paid by parent or guardian, were perceived to remain constant

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[1]Interview with Dr. Jodie C. Smith, Chairman of the Scholarship Committee, University of Oklahoma, June 7, 1961.

from the time the student made his original application for scholarship. It was further limited in that comparisons concerning the size of high school from which recipients graduated included only high schools in the State of Oklahoma.

## Purpose of the Study

It was the purpose of this study to determine whether, among scholarship recipients, there are certain characteristics possessed by those who graduate, as compared to those who do not graduate. A further purpose was to compare items such as academic persistence, grade point achievement, and test results achieved by the total group of scholarship recipients with the total group of students of the Longitudinal Descriptive and Predictive Study of the Freshman Class of 1952.[1] More specifically, the study attempted to answer the following questions:

1. Do male or female scholarship recipients persist longer in school?

2. Do recipients whose family's income is in the upper or high range persist in school longer than those whose family's income is in the lower or middle range?

3. Do students who had been gainfully employed during a twelve-month period prior to their application for

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[1] A Longitudinal Descriptive and Predictive Study of the Freshman Class of 1952, August, 1955 to December, 1958. Prepared by the Staff of the Guidance Service; Psychological Clinic; and The University College, University of Oklahoma, Norman, Oklahoma.

scholarship persevere in school longer than those who have not worked?

4. Do recipients whose fathers are employed in professional or managerial occupations stay in school longer than those whose fathers are in occupations of lesser status?

5. Does the percentage of the recipient's expenses to be paid for by the parents tend to have a bearing on academic persistence?

## Definition of Terms

"Income range" is defined according to the following annual income table as:

| | |
|---|---|
| "Lower range" | Below $3,000.00 |
| "Middle range" | $3,000.00 to $5,000.00 |
| "Upper range" | $5,000.00 to $7,500.00 |
| "High range" | Above $7,500.00 |

The Ohio State Psychological Examination and the Iowa High School Content examination shall be referred to as "OSPE" and "IHSC" respectively.

A University of Oklahoma Scholarship is that grant by the University of Oklahoma which permits students to enroll with waiver of tuition fees. The University of Oklahoma Scholarship is also known as Fee Remissional Scholarship or Regents Scholarship.

## Nature and Sources of Data

There were five primary sources from which data involved in this study were secured. The administrative offices of the University of Oklahoma were: the Office of Admissions

and Records, from which data were taken from each recipient's matriculation-information card, application for admission, and OSPE and IHSC test results; the Controller's Office records of scholarship recipients for the school years involved in the study; the Office of Student Affairs, from which data was taken from each recipient's personal file folder and Application for University of Oklahoma Scholarship; and the Dean's Office of the college in which each recipient was last enrolled, from which the student's cumulative grade point average was learned. The Annual Statistical and Financial Reports on file in the Finance Division of the Oklahoma State Department of Education were the source from which data pertaining to the size of high school of each Oklahoma high school graduate was acquired.

## The Population

One hundred sixteen beginning freshmen were awarded University of Oklahoma Scholarships during the fall semesters of the 1955-56 and 1956-57 school terms. Of this number, 12 were eliminated from the study because their records did not include scholarship applications. Test scores were not available for four of the recipients, which excluded them from the study. The remainder of the recipients composed the population for the study.

## Method of Research and Treatment of Data

Data gathered on all scholarship recipients were

grouped and tabulations made by categories, as follows:

1. Those who completed their degree program
2. Those who did not complete their degree program
3. The total group

Tables of academic persistence were made for all of the following items:

a. sex
b. father's occupation
c. mother's occupation
d. grade point average at termination of studies
e. total family income
f. OSPE test results
g. IHSC test results
h. amount of money recipient earned over twelve-month period prior to application
i. per cent of school expenses to be paid by parent or guardian
j. proposed major
k. recipient's work plans while attending the University

Grade point averages were categorized according to the following table:

3.6 to 4.0
3.1 to 3.5
2.6 to 3.0
2.1 to 2.5
1.6 to 2.0
1.1 to 1.5
0.6 to 1.0
0.0 to 0.5

Comparisons with the Longitudinal Descriptive and Predictive Study of the Freshman Class of 1952[1] were made to determine whether scholarship recipients as a total group persist in school longer or achieve better academically than the freshman class used in the previous study. These comparisons were assumed plausible after consideration of the fact that the 1952 study ran correlations between the freshman classes of 1952, '53, and '56, and found that:

> To some extent we know empirically that on massed data of this sort conditions are approximately constant. For example, the freshman classes of 1953 and 1956 were found to be approximately equivalent to the class of 1952, as far as the percentage of students scoring in each decile on the OSPE was concerned. Similarly, no statistically significant differences between these three classes were found with respect to scores on other freshman placement tests, etc.[2]

Parents occupations were analyzed according to the breakdown of major occupational groups and divisions listed in The Dictionary of Occupational Titles[3] as follows:

I. Professional and managerial occupations

   A. Professional occupations
   B. Semiprofessional occupations
   C. Managerial and official occupations

II. Clerical and sales occupations

   A. Clerical and kindred occupations
   B. Sales and kindred occupations

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[1] Ibid.

[2] Ibid., XVI, 2.

[3] U. S. Department of Labor, Bureau of Employment Security, Dictionary of Occupational Titles, Vol. II, March, 1949, p. ix.

III. Service Occupations

A. Domestic service occupations
B. Personal service occupations
C. Protective service occupations
D. Building service workers and porters

IV. Agricultural, fishery, forestry, and kindred occupations

A. Agricultural, horticultural, and kindred occupations
B. Fishery occupations
C. Forestry (except logging) and hunting and trapping occupations

V. Skilled Occupations

VI. Semiskilled occupations

VII. Unskilled occupations

Results of findings were presented in tabular form and comparisons made in terms of frequencies and percentages. The Chi-Square test for independence was used to test the significance of the frequencies. Recommendations were made as a result of an analysis of the findings.

A thorough review was made of the literature in the field of student scholarships and financial aids in higher education. The review included dissertations, periodicals, pamphlets, encyclopedia, theses, research reports, and other printed materials made available through the resources of the University of Oklahoma Library, the Office of Student Affairs, and through inter-library loan. A thorough search was made of all general guides, including: Dissertation Abstracts, Doctoral Dissertations Accepted by American Universities, Encyclopedia of Educational Research, Readers'

Guide to Periodical Literature, Research Studies in Education, Review of Educational Research, and The Education Index.

## Value of the Study

The study will determine whether there are certain characteristics which scholarship recipients who persist to graduation have which those who do not complete their studies do not possess. If it is found that there are some measurable differences, the University will be able to supply educational funds to those who will be most apt to reap maximum educational benefits.

Correlation studies between the OSPE and the IHSC examination and the American College Testing Program are now underway. When these studies are completed, conclusions and recommendations of this study will be most meaningful to the committee which considers scholarship applications.

## CHAPTER II

## SURVEY OF RELATED LITERATURE

The problem of attempting to discover able students who have a definite need for financial assistance in order to attend institutions of higher learning is not new. There is an abundance of personal opinion that has been voiced and published in the field of student financial aid in higher education. In very few instances have institutions made objective appraisals or evaluations of their scholarship programs. Situations peculiar to a few specific institutions have been studied thoroughly in attempts to find answers to specific problems. In surveying the literature, primary emphasis was focused on scholarly studies which emphasized the discovery of financial need and academic excellence.

In 1927, at the University of Missouri, Zeigel[1] compared the achievement of high school honor students who had received the Curator's Scholarship with regular students. As a result of the study it was concluded that: (1) honor students were found to be superior to regular students in

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[1]William H. Zeigel, Jr., "Achievement of High-School Honor Students in the University of Missouri," School and Society, XXV (January, 1927), pp. 82-84.

scholastic attainments and in mental ability; (2) honor students are younger, are more likely to graduate, and graduate in less time than regular students. In general, the honor students seemed superior to regular students in all phases of the questions studied and, contrary to the popular belief at that time, were really the leaders in a majority of school activities.

Moon,[1] in 1930, studied two groups of students who entered the University of Chicago under one of the two scholarship programs then offered to freshmen. Comparisons were made not only between students holding the two different types of scholarships, but, when possible, between scholarship holders and the student body as a whole. Study was made of: (1) the average grades made in the University; (2) the percentage of scholarship holders who earned the baccalaureate degree; (3) the percentage who received scholastic honors; and (4) the number who achieved positions of leadership among the student body. The study demonstrated that scholarship students, in general, were superior in academic undertakings, won in large numbers the scholastic honors offered by the University, and were able to assume places of leadership among the other students on the campus. The scholarships were able to attract a group of freshmen who were superior students as judged by several criteria.

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[1]George R. Moon, "Records of Students Who Entered University with Freshman Scholarships," School Review, XXXVIII (June, 1930), pp. 443-449.

Jones[1] evaluated in 1939 the restrictive and regulative factors under which scholarships and fellowships were available, awarded, and held in the universities of the Association of American Universities. Through study of official publications of the universities, articles, and questionnaires, it was found that there were 200 distinct items of information asked or given on application forms for undergraduate scholarships. Ample evidence was found that indicated that research was greatly needed in determining adequate and just methods of selecting students to receive scholarships. Sixteen criteria for evaluation of the scholarship and fellowship programs were evolved and applied to the findings.

Williams[2] outlined the fundamental principles of administering scholarships through university offices. He stated that the main considerations of any institution in the administration of its scholarship program should be the number of scholarships needed, their equitable distribution among the departments, the purpose each is to accomplish, and the over-all objectives of the scholarship program. He listed and outlined ten specific principles which should be observed in administering a scholarship program.

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[1]Aaron E. Jones, "Awarding Scholarships and Fellowships," Journal of Higher Education, XI (November, 1940), pp. 427-430.

[2]Robert L. Williams, "The Administration of Scholarships," Journal of Higher Education, XVII (February, 1946), pp. 97-99.

In 1946 the Committee on Student Personnel Work of the American Council on Education[1] stated that the criteria for the selection of students to whom awards are to be given must be established by a central committee of each institution and should be carefully reviewed from time to time so that policies serve current student and institutional needs. The authors of the report recommended that the critical threshold should sort out only those financially needy students of unusual academic fitness, such as the top fifth in class rank or those above the ninetieth percentile in a scholastic ability test or battery of tests to constitute the group eligible for scholarships. The selection of specific persons for award and the amount of the award could then be made upon the basis of the applicant's leadership promise and relative need.

In 1947 the President's Commission on Higher Education[2] submitted their report on equalizing and expanding individual opportunities in higher education which stressed the grave inequalities in family income throughout the nation, the increasing tuition and other fees, the increasing living costs of students, and the difficulties confronted

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[1]American Council on Education, Financial Assistance for College Students, A special report prepared by the Committee on Student Personnel Work (Washington: U.S. Government Printing Office, 1946), p. 53.

[2]President's Commission on Higher Education, Higher Education for American Democrary ("Equalizing and Expanding Individual Opportunity," Vol. II, Washington: U.S. Government Printing Office, 1947), pp. 45-57.

where high school graduates live at a distance from a college. The Commission reported that in 1940-41 colleges and universities had paid approximately $5,000,000 in outright grants to students to assist them in meeting their immediate financial needs. The inadequacy of this amount to meet the total need was indicated by the fact that there were only 50,000 recipients and the average grant amounted to about $100.00. The report pointed out that a program of student aid should neither diminish the responsibility of individual American families to help their children obtain a college education, nor detract from the resourcefulness and initiative of the student who has both the ability and opportunity to carry on a modest amount of part-time employment. But, as the report showed, many families cannot afford to send their children to college, and the proportion of students who can secure part-time employment decreases as the number of students in any one institution increases. The Commission strongly recommended that all institutions of higher learning seek increased private donations for scholarships which would be free from encumbrances designating specific qualifications as to the recipients, fields of study, and the like; and that donors of large amounts be encouraged to distribute student aid more widely among the colleges and universities.

Typical of some of the scholarship programs in the

United States is that reported by Farber[1] at DePauw University. Edward Rector in 1919 endowed the Scholarship Foundation of DePauw University with over $2,500,000 to establish tuition scholarships at DePauw. Prior to the publication of Farber's report, two studies had been undertaken to measure the effectiveness of the program. As a result of the findings of the studies a testing program was made part of the application process, stipends were increased to cover more of the costs for the needy student, and educational level of the parents and the age of the candidates were deemed important factors in selecting Rector scholars.

Ewing[2] interviewed 34 women students who entered Ohio University in 1949 and who were, or would have been, sophomores at the time of the study. The study was made to ascertain the degree of success scholarship students had achieved in the general social and academic areas as seen in relation to specific adjustments in orientation, activities, part-time employment, housing, counseling, and vocational goals. She also attempted to discover how well the counseling services of advisors, generalists, and specialists met the needs of scholarship students. Among the findings of the

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[1]Robert H. Farber, "The Edward Rector Scholarship Foundation," Higher Education, VII (September, 1950), pp. 13-15.

[2]Jean K. Ewing, "An Investigation of the Success of Freshmen Tuition Scholarship Students Entering Ohio University in September, 1949" (Unpublished Master's Thesis, Ohio University, 1951).

study were the facts that tuition scholarships were not added incentives to attend Ohio University; and that more than half of the 34 students interviewed were no longer on tuition scholarships as a result of failure to maintain the grades required.

At the University of Chicago, Warren[1] studied a group of students who applied for financial aid and who entered the undergraduate program in the fall of 1950. Seven social and economic factors were studied on the basis of their possible relevance to selectivity. These factors included parental income, parental occupation, level of parental education, nativity of parents, marital status, size of the family, and size and type of home community. Warren found that lack of family income, lack of parental education, lower prestige occupations, and large families appeared to have operated as barriers to entering the University of Chicago--either with or without financial aid. He did emphasize, however, that the social and economic factors investigated do not operate independently of each other or of other factors such as performance in high school and on scholastic aptitude tests.

Colver,[2] in 1952, made an evaluation of the selection

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[1]William H. Warren, Jr., "Who Receives Our Scholarships?" College and University, XXVII (April, 1952), pp. 378-390.

[2]Robert M. Colver, "An Evaluation of the Selection Process and the Results of the Summerfield Scholarship Program at the University of Kansas" (unpublished Ed.D. dissertation, University of Kansas, 1952).

process of the Summerfield Scholarship program at the University of Kansas. The Summerfield endowment provided for an income of at least $20,000 annually to be granted to ten or more new scholars chosen each year. The scholarships were held throughout the four years of college undergraduate work unless the scholar failed to maintain the standards on which it was granted. Financial need was a factor in determining the amount of financial aid granted to each scholar. The selection process was evaluated by comparing academic records of a group of scholars selected for the program with a group of rejected candidates. Colver found that 81 per cent of the selected scholars either graduated from or were currently students of the university, as compared to 82 per cent of the rejected group. Only 25 per cent of the selected scholars were recognized as student leaders, even though one of the bases for selection was potential leadership. It was concluded that the selection process had been quite effective, but that two weaknesses needed emphasis: (1) the factor of leadership; and (2) a reduction in the number of selected scholars who fail to maintain the standard (41 per cent) was necessary if maximum benefits were to be realized.

Hollinshead,[1] in 1952, stated that our present resources to aid students have not actually brought many students to college campuses who would not otherwise have come.

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[1]Byron S. Hollinshead, Who Should Go to College?, (New York: Columbia University Press, 1952), p. 95.

The author made a study in about ten colleges of the number of students who did not attend a particular college because the scholarship award was not large enough to enable them to do so. He found that in an overwhelming majority of cases the students did go to college somewhere else. The author goes on to state that the present effect of scholarships is largely to reshuffle the students, and that in awarding scholarships, colleges naturally are most concerned about their own self-interests.

Williamson and Feder[1] investigated, by a comparison of scholarship and matched non-scholarship students, whether the high school scholarship award selection program at the University of Denver was productive in terms of: (1) the extent to which scholarships were awarded to high school students who became campus leaders both academically and in co-curricular activities; and (2) the differential extent to which scholarship students continued in college to the point of graduation after their scholarships terminated. The authors concluded, as a result of the findings of the study, that the investment made in the scholarship students investigated was a worthy one.

Schenk[2] evaluated the procedures used in awarding

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[1]B. Lois Williamson, and Daniel D. Feder, "Scholarship Winners," The Personnel and Guidance Journal, XXXI (January, 1953), pp. 236-240.

[2]Quentin Frederick Schenk, "Evaluation of Procedures Used in Awarding Scholarships at a State University" (unpublished Ph.D. dissertation, University of Wisconsin, 1953).

scholarships provided for in the will of Kemper K. Knapp. The study was made to determine whether the means used to distribute scholarship funds and the usage of the funds were in keeping with the intentions of the donor. The study also assessed the effect which scholarships have upon the students who had them, as contrasted with a comparable group of students who did not have scholarships. Schenk found that there was room for extensive improvement in the procedures which were used to make the awards to the students who received them. He also found that the function of financial need and the factors which determine that need are inadequate for the purpose of selecting scholarship recipients. He suggested that, partly as a result of inadequate procedures and the confusion in this area, many individuals who did not need financial aid had received scholarships. He found on the other hand that capable students who could not attend college without financial aid, often did not receive scholarship help.

In 1955 Schlegel[1] reported on a study comparing tuition, enrollment, endowment, and scholarships in 1952-53 with 1948-49. The study was limited to 25 selected colleges with less than 3,500 students for the school year 1952-53. In these 25 colleges where enrollment dropped an average of 11 per cent, total student aid showed an increase of

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[1]John N. Schlegel, "Colleges Are Increasing Student Aid," The Educational Record, XXXVI (April, 1955), pp. 148-149.

$2,270,000: from $1,730,000 in 1948-49 to $4,000,000 in 1952-53. It is significant to note that only 36 per cent of the aid was endowed, which means that these 25 institutions put into student aid from operating funds an average of $102,000 per college.

In 1955 Jones[1] investigated the measures used in the selection of freshman State and Merit Scholarship recipients at Indiana University in 1953. The purpose of the investigation was to aid in the formulation of criteria which might serve as guides in the selection of the best scholastically qualified students for scholarship awards. His objectives were to determine the efficiency of high school rank and the Indiana State Scholarship Test for High School Seniors in indicating students of high academic promise; and to analyze the performance of the scholarship recipients on the Indiana State Scholarship Test. He found that high school rank was more efficient than the Indiana State Scholarship Test, not only in predicting academic performance but also in supplying a reliable distinction between the students awarded scholarships. The results also indicated a need for further work in improving the discriminating power of the scholarship test.

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[1]William Alten Jones, "The Adequacy of Certain Measures Used in the Selection of Freshman State and Merit Scholarship Recipients at Indiana University," (unpublished Ed.D. dissertation, Indiana University, 1955).

Harris,[1] in 1955, made a study to determine whether sound, workable procedures for identifying financially needy students were being used in awarding scholarships when financial need was considered one of the prime factors in receiving the scholarship. Harris, like Schenk,[2] used the terms of the will of Kemper K. Knapp as a determinant of procedures and selection of scholarship awards. He found that: (1) generally the students selected for Knapp scholarships in 1950 did not need financial assistance to attend the University; and (2) there was inaccurate reporting of income by many award winners of their families' income while the non-award group was much more accurate in reporting their families' incomes. The distortion of income seemed to make the difference, in many cases, between receiving and not receiving a Knapp Scholarship.

An investigation, by Parker and Wright,[3] of the part that scholarship awards play in a student's decision to attend an institution of higher learning, was conducted at Brigham Young University. The methods of investigation were: (1) to interview each student who had received a scholarship

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[1]Bernard B. Harris, "The Identification of Financial Need in Awarding of Scholarships at a State University" (unpublished Ph.D. dissertation, University of Wisconsin,

[2]Schenk, loc. cit.

[3]Clyde A. Parker and E. Wayne Wright, "Do Scholarships Influence College Attendance?" Journal of Higher Education, XXVII (March, 1956), pp. 147-150.

and was then enrolled; and (2) by means of a questionnaire, to ascertain why students who had applied for a scholarship and were not attending the University had decided not to enroll. It was found that 87.8 per cent of the students said they would have attended some college even if they had not received the scholarship. Seventy-one per cent said they would have attended the institution in which they were enrolled without the scholarship. These findings were supported by the fact that the non-scholarship recipients were enrolled in approximately the proportions reported by the scholarship students. The authors concluded that if the fact that there is little published in the educational literature about scholarship practices and policies is indicative of what schools know about the effects and results of their current practices, it would seem that a great deal of money is being spent without much knowledge of its results. It was the opinion of the authors that such money could be better spent if these institutions were more aware of the types of students they are serving, whether the scholarship students are succeeding better than other students, whether scholarships are "needed" by these students, and if their scholarships are serving the functions for which they were established.

In 1956, Letson[1] described the students who had

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[1]Robert Justin Letson, "A Study of the Curators Freshman Scholarship and Award Students and Their Success in the University of Missouri, 1950-54" (unpublished Ed.D. dissertation, University of Missouri, 1956).

entered the University of Missouri with Curators Freshman Scholarships or Awards during the period 1950-54, and investigated their success in the University. The Award students and the Scholarship students were found to be markedly superior to other University students in all measures of scholastic achievement studied which included: first semester grade-point average; making the honor lists; persistence in attendance; and total grade point average. For the groups as a whole, the procedures used appeared to have been effective in selecting worthy students. It was felt, however, that the level of scholastic achievement of the students could have been increased by raising the requirement levels on the selective criteria, especially on high school percentile rank.

In 1957, Clark, Wright, and Parker[1] reported on a study designed to determine whether renewable scholarships produced greater academic achievement among the scholarship recipients than that achieved by non-recipients. A group of students who received scholarships were matched with a group of non-scholarship students on the basis of (1) apparent general motivation and ability as measured by high school grade point averages, and (2) A. C. E.[2] scores. The

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[1]Selby G. Clark, E. Wayne Wright, and Clyde A. Parker, "Do Renewable Scholarships Promote Higher Grades?" The Personnel and Guidance Journal, XXXV (January, 1957), pp. 302-305.

[2]American Council on Education Psychological Examination.

study seemed to indicate that sufficient additional extrinsic motivation can be produced in scholarship students through the rewarding effect of a renewable-type scholarship to produce a significant change in effort which results in significantly higher college grades.

The President's Committee on Education Beyond the High School in their Second Report[1] estimated that in 1955 over $55,000,000 was available for scholarships: $35,000,000 through the colleges, $10,000,000 through corporations and foundations, and about $10,000,000 in various State programs. The report further stated that to the 1955 estimate should now be added another $5,000,000 to account for: (1) The National Merit Scholarship program; (2) increases in scholarship assistance by New York and California and possibly other states; and (3) natural growth in scholarship funds. In sum, omitting Federal funds, the scholarship total was roughly $60,000,000.

On the effectiveness of the scholarships, the Committee reported that a survey covering 147 representative public and private colleges and universities during the period 1950-54, showed that nearly two-thirds of all scholarships paid less than 20 per cent of the total college expenses of the holders. Graduates reported a median total 4-year expenditure of $5,020, of which only 6.4 per cent,

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[1]President's Committee on Education Beyond the High School, Second Report to the President, (Washington: U.S. Government Printing Office, 1957), pp. 39-57.

or $320, came from scholarship funds. Students did not or could not take full advantage of available funds for student assistance because of: (1) tightly restrictive categorical grants; (2) lack of timely knowledge of the existence of student assistance funds; (3) scholarships too small to be of significant assistance; and (4) lack of initiative or imagination in the administration of some student assistance programs. It was also found that student financial assistance was available very unevenly. One-half of all the scholarship funds in the United States were concentrated in 50 institutions, and very few states had general scholarship programs.

The Committee recommended that private, local and state sources increase their support of scholarship funds to several times the present amount and number of scholarships. A second recommendation was that the formulation of any scholarship policy should include provision for funds for the institution to pay the cost of educating the student above that which he pays through fees and tuition, since to attempt to educate more students without the means to provide additional salaries and facilities would inevitably lead to a deterioration of the quality of education.

In 1957, Iffert[1] reported on a study pertaining to academic persistence of college students who enrolled as

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[1]Robert E. Iffert, Retention and Withdrawal of College Students ("Financial Factors and Persistence in College," Chapter VII, Washington: U.S. Government Printing Office, 1957), pp. 60-71.

freshmen in the United States in the fall of 1950. It was found that the financial problem is a major factor in student mortality. About one-fourth of the 7,437 students who reported for the study received some scholarship aid. One-sixth received some, but less than enough to cover 20 per cent of their expenses. One-twentieth received enough scholarship assistance to cover from 20 to 39 per cent of their expenses. Information from the students in the sample applied to the total freshman enrollment of 1950 indicated that nearly $103,000,000 of scholarship money was spent annually by undergraduate students during the 4-year period, 1950-54. Of the $103,000,000, 4.8 per cent was used in defraying expenses of students who remained in the institution of their first enrollment no more than one year. Five and one-half per cent was used by students whose longest period of attendance was two years. Thirteen per cent was used by students who were dropouts during the third and fourth years, and other non-graduates spent 1.8 per cent. This means that of the $103,000,000 expended annually for scholarships during the 4-year period, 1950-54, only about $77,000,000 was spent on graduates. The difference between the total amounts expended for scholarships and the amount spent on graduates would have produced more than 80,000 additional graduates at the average rate of $320 per graduate.

Hollis,[1] in 1957, reported in a study of college costs of the 1952-53 school year that, even though scholarships constituted only 4.8 per cent of all student income, they were highly important in the budgets of the 21 per cent who received them. Students who held scholarships in 1952-53 received a median stipend of $218 from college controlled funds. The study established the relationship of family income to the frequency and size of scholarships and found that the median family income of the non-scholarship students was $5,260, as compared to $4,323 for scholarship students. Students from families whose income was under $5,000 received a larger percentage of all levels of scholarship awards than higher income groups. It was noteworthy, however, that as the size of the stipend from college controlled scholarships increased, the percentage of students from the "under $5,000" family income group receiving them decreased. The larger stipends went more frequently to students from higher family income brackets. Over two-thirds of the "under $200" college controlled scholarships were awarded to students from the low family income group. Nearly 30 per cent were awarded to students from the $5,000 to $10,999 family income group, and only 3.1 per cent to the "$11,000 and up" bracket. Nearly half of all college controlled scholarships awarded had stipends of less than $200.

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[1]Ernest V. Hollis, Costs of Attending College ("Major Sources of Student Income," Chapter III, Washington: U.S. Government Printing Office, 1957), pp. 46-61.

Neidt[1] attempted to determine the relative amount of emphasis which the cumulative grade average and the scores on scholastic aptitude and achievement tests should receive in considering applicants for scholarships at the sophomore, junior, and senior levels. The study, conducted at the University of Nebraska, used the grade average obtained the first semester following the receipt of a scholarship as a criterion to arrive at the following conclusions: (1) the cumulative grade average is superior to test results for selecting sophomore, junior, and senior scholarship recipients; (2) an achievement test battery, administered at the time of application for scholarship, results in increasing the effectiveness of a scholarship selection program at the sophomore and junior levels, but not at the senior level; and (3) pre-registration tests do not contribute significantly to upperclass scholarship procedures when combined with cumulative grade average and results from an achievement test administered at the time of application for scholarships.

Moon[2] reported in 1959 how the College Scholarship Service is directing its energies toward helping higher edu-

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[1]Charles O. Neidt, "The Use of Test Results and Cumulative Grade Averages in Selecting Upperclass Scholarship Recipients," College and University, XXXIV (Spring, 1959), pp. 316-321.

[2]Rexford G. Moon, Jr., "Care, Cooperation, and Coordination in Student Financial Aid Administration," The Educational Record, XXXX (October, 1959), pp. 342-347.

cation realize care, cooperation, and coordination in student financial aid administration. The College Scholarship Service is an association of more than 235 colleges, formed principally to act as a clearinghouse for family financial information to parents of students seeking financial help at one or more of the participating colleges. Each college requires all parents of entering students seeking aid to file a form describing their total family financial situation. Each form is evaluated for an estimate of the family's ability to pay for college, and copies of the evaluation results and of the form itself are sent to each college named by the parents to receive them. No college is forced into following these procedures or using the results provided by the Service. Most colleges do, however, and some colleges and programs have reported that their financial aids efficiency has been increased 25 per cent because of the increased care which they, in consort with others, have exercised in aid program management.

In 1959, Little[1] provided the figures which resulted from a study of over 38,000 students enrolling in Wisconsin's private and public schools in the fall of 1958. He found that: (1) about 19 per cent of all students reporting held some type of scholarship or award; (2) more than 60 per cent of all scholarship awards were reported as being

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[1] J. Kenneth Little, "College Scholarships in Wisconsin," The Educational Record, XXXX (October, 1959), pp. 348-352.

valid for the freshman year only; (3) about 38 per cent of the awards were for tuition and fees only, 43 per cent provided cash stipends only, five per cent provided for all college expenses, and 19 per cent provided some cash in addition to tuition; (4) more than 40 per cent of the scholarships or awards had been awarded by agencies other than the colleges and universities; (5) 55 per cent of the students who held scholarships said they would have attended college if they had not received a scholarship; 11 per cent said they would not have; and 34 per cent said it would have been doubtful; (6) as many students who had scholarships borrowed money for college expenses as did those without scholarships; and (7) more than half of the students reported plans to work part time while attending school. Little concluded that if the purpose of scholarships is to assist worthy students who cannot attend college without financial help, scholarships as they were awarded in 1958 were missing the mark. He also recommended a state-wide program of student financial assistance, based on (1) the need for financial aid by top-ranking high school graduates who do not now attend college, and (2) a consideration of the nature and scope of current college scholarship programs. He listed five objectives upon which such a program would focus.

## Summary

There appears to be only a limited amount of scholarly literature devoted to scholarship recipients and their

academic success in institutions of higher learning. Evidence was found that indicated that more research was greatly needed in this area. Figures prove that great sums of money have been expended in the form of scholarships to students who do not graduate, while at the same time many deserving and needy students do not receive assistance in any form.

It is evident that actual achievement in the field of student financial aid in many institutions of higher learning falls drastically short of expectation. Members of the Scholarship Committee at the University of Oklahoma have expressed concern over problems similar to those discussed in the related literature. It was with hope that some solutions could be found to some of the problems which have been expressed that this study was undertaken.

## CHAPTER III

## SCHOLARSHIP RECIPIENTS

Many similarities existed among the subjects of the study. With one exception, the scholarship recipients were single at the time of their first college enrollment. This married student was also the only one who declared that another person was financially dependent on him. Only two of the total number were physically handicapped. Both of these received a Vocational Rehabilitation grant after their initial enrollment. There were no veterans in the group.

The recipients were all recent high school graduates at the time they entered the University. Forty-seven of the total group were awarded scholarships for the fall semester of the 1955-56 school year. They had all graduated from high school the same year. Of the 53 recipients who had enrolled in the fall of 1956, 51 had graduated from high school the same year, and two the previous year. Ninety-seven of the recipients were graduates of Oklahoma high schools, the remainder having graduated from high schools in California, Missouri, and Texas.

With one exception, all recipients were teen-age

at the time of their matriculation. Six of the group were 17, 83 were 18, 10 were 19, and one was 20 years of age. Age at the time of matriculation and persistence to graduation, when tested by the Chi-Square Test of Significance,[1] revealed no significant differences at the .05 level of confidence. The results of all tests of significance which were found to be not significant are found in Table 12.

Of the total group, 55 have graduated, and 45 have not graduated, from the University of Oklahoma. Fourteen of the students graduated in 1959, nine in 1960, and 32 in 1961. Fifty-six of the recipients were male and 44 were female. Of the 56 male recipients, 30 graduated and 26 did not. Twenty-five of the 44 females graduated while 19 did not. The difference by sex among the recipients was tested by Chi-Square and was found not to be statistically significant at the .05 level of confidence.

All mothers of all recipients were living at the time of application for scholarship. Ninety-one of the applicants' fathers were living and nine were deceased. Of the 91 first mentioned, 42 have not graduated, while 49 have. Six of the nine whose fathers were deceased did graduate. This, when tested by Chi-Square, was found to be not significant.

Of the 91 recipients whose fathers were living, five either did not report or did not know their father's occu-

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[1]J. P. Guildord, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Co., Inc., 1956), pp. 228-256.

pation. There was no significant difference at the .05 level of confidence between father's occupation and graduation; however, it is interesting to note that, of the population studied, fewer than 35 per cent of those whose fathers were employed in skilled, semiskilled and unskilled occupations graduated, as compared to over 60 per cent in other occupations. Table 1 lists father's occupation, frequency, and percentage in each category. Of the 14 students who were not included in Table 1, nine, or 64.3 per cent, graduated, and five, or 35.7 per cent, did not.

TABLE 1

FATHER'S OCCUPATION OF 86 SCHOLARSHIP RECIPIENTS

| Father's Occupation | Graduates No. | Graduates Per Cent | Non-Graduates No. | Non-Graduates Per Cent | Total No. |
|---|---|---|---|---|---|
| Professional and Managerial | 15 | 60 | 10 | 40 | 25 |
| Clerical and Sales | 5 | 62.5 | 3 | 37.5 | 8 |
| Service Occupations | 5 | 62.5 | 3 | 37.5 | 8 |
| Agricultural and Horticultural | 13 | 65 | 7 | 35 | 20 |
| Skilled Occupations | 3 | 25 | 9 | 75 | 12 |
| Semi-Skilled Occupations | 5 | 41.6 | 7 | 58.3 | 12 |
| Unskilled Occupations | 0 | 0 | 1 | 100 | 1 |

Sixty-seven recipients reported that their mothers were unemployed. A comparison between working and non-work-

ing mothers of recipients graduating from the University showed that there was no significant difference at the .05 level of confidence.

Only 15 of the total group reported that either of their parents were former University of Oklahoma students. The obtained Chi-Square did not indicate a significant difference between these at the .05 level of confidence and the remaining 85 in regard to persistence to graduation. Of the 85 whose parents had not attended the University, however, only 44, or 51.7 per cent, graduated, while 11, or 73.3 per cent, of the former group did graduate.

No significant difference was found at the .05 level of confidence between the size of the high school from which the recipient graduated and the student's grade point average at the termination of his studies. A significance was found, however, between the size of high school and persistence to graduation. The obtained Chi-Square was 13.153, as compared to Chi-Square at the .05 level of confidence of 11.070. Table 2 shows the number of students from each size of high school and frequency and percentage of graduates and non-graduates in each category. While only 36.1 per cent of the recipients graduated from high schools of 500 and over, 26, or over 49 per cent, of the 53 graduates were from these larger schools. Nearly 80 per cent of the total group of 44 non-graduates graduated from high schools with fewer than 500 students.

TABLE 2

SIZE OF HIGH SCHOOL OF 97 OKLAHOMA HIGH SCHOOL GRADUATES

| No. of Students in High School | Graduates No. | Graduates Per Cent | Non-Graduates No. | Non-Graduates Per Cent | Total No. |
|---|---|---|---|---|---|
| 1 to 99 | 14 | 56 | 11 | 44 | 25 |
| 100 to 299 | 10 | 40 | 15 | 60 | 25 |
| 300 to 499 | 3 | 25 | 9 | 75 | 12 |
| 500 to 999 | 14 | 66.7 | 7 | 33.3 | 21 |
| 1000 to 1999 | 7 | 87.5 | 1 | 12.5 | 8 |
| 2000 and Over | 5 | 83.3 | 1 | 16.7 | 6 |

Only 19 of the total group had not been gainfully employed the year prior to their first enrollment at the University. Although the obtained Chi-Square at the .05 level of confidence (10.467) was not significant, the .10 level shows 9.236, which is significant. Table 3 shows the percentage and frequency of each level of earning. It may be noteworthy to consider that while only 15 per cent of the total group earned over $700 prior to enrollment, this group provided nearly 25 per cent of the total number of 45 who did not graduate.

Each applicant for scholarship was asked whether he intended to work to help pay his way through college. Of the total group, 74 stated that they would seek employment while in college, 25 did not plan to work, and one did not

know whether he intended to work or not. Of the 74 who did plan to work, the records show that 22 actually did work. Six of the 25 who did not plan to work actually did. The one who did not know his intentions at the time he applied for scholarship, did not work. There is a very good possibility that many of those whose records indicate they did not work were actually employed while attending the University. This is due to the fact that the authorities do not know unless: (1) the student was placed through student employment office, or (2) the student reported the fact to the Office of Student Affairs. From the figures which were available no significant difference was found between the workers and non-workers in regard to graduation.

TABLE 3

EARNINGS OF 100 SCHOLARSHIP RECIPIENTS THE YEAR PRIOR TO FIRST COLLEGE ENROLLMENT

| Earnings | Graduates No. | Graduates Per Cent | Non-Graduates No. | Non-Graduates Per Cent | Total No. |
|---|---|---|---|---|---|
| $0 | 9 | 47.3 | 10 | 52.7 | 19 |
| $1 to $99 | 6 | 54.5 | 5 | 45.5 | 11 |
| $100 to $399 | 22 | 73.3 | 8 | 26.7 | 30 |
| $400 to $699 | 14 | 56.0 | 11 | 44.0 | 25 |
| $700 to $999 | 4 | 33.3 | 8 | 66.7 | 12 |
| $1000 and Over | 0 | 0.0 | 3 | 100.0 | 3 |

One very interesting aspect of working in college was the expected earnings of the recipients. Table 4 shows the frequencies and percentages of the graduates and non-graduates in regard to their anticipated yearly earnings while in college. When these groups were tested for differences by the Chi-Square Test of Significance, the obtained Chi-Square was found to be 13.27. Chi-Square at the .05 level of confidence was found to be 12.59. The differences, therefore, were found to be significant.

It should be noted that with the exception of the four students who indicated anticipated earnings of from $1 to $99, as anticipated earnings rose, the percentage who graduated in each category decreased. It should be mentioned also that of the total number of recipients, 20 stated that they intended to work, but did not know how much they expected to earn. Of these 20 there were 14, or 70 per cent, who did not graduate. As may be noted on Table 4, this is a higher percentage than all but two of the categories on the Table.

Total family income of scholarship recipients in regard to graduation was found to be not significant. Recipients' family income was as follows:

| | No. | Graduates | Non-Graduates |
|---|---|---|---|
| Below $3000.00 | 37 | 19 | 18 |
| $3000.00 to $5000.00 | 50 | 29 | 21 |
| $5000.00 to $7500.00 | 12 | 6 | 6 |
| Over $7500.00 | 1 | 1 | 0 |

There was also no significant difference found between graduation and the number of others dependent on the family income, who were attending school.

TABLE 4

ANTICIPATED EARNINGS DURING FIRST YEAR OF COLLEGE BY 80 SCHOLARSHIP RECIPIENTS

| Anticipated Earnings | Graduates No. | Graduates Per Cent | Non-Graduates No. | Non-Graduates Per Cent | Total No. |
|---|---|---|---|---|---|
| $0 | 20 | 77 | 6 | 23 | 26 |
| $1 to $99 | 0 | 0 | 4 | 100 | 4 |
| $100 to $299 | 8 | 73 | 3 | 27 | 11 |
| $300 to $499 | 13 | 59 | 9 | 41 | 22 |
| $500 to $699 | 6 | 55 | 5 | 45 | 11 |
| $700 to $999 | 2 | 50 | 2 | 50 | 4 |
| $1000 and Over | 0 | 0 | 2 | 100 | 2 |

When the Chi-Square Test of Significance was applied to the graduates and the non-graduates in comparison to the per cent of expenses which the recipients reported were to be paid by their parents, the obtained Chi-Square was found to be 12.57. Chi-Square at the .05 level of confidence was found to be 9.49. This, of course, indicates a significant difference. Table 5 lists the percentages of the number along with each categorical frequency. It should be noted that over 55 per cent of the 45 non-graduates stated that their parents would provide less than 20 per cent of their college expenses.

Only eight of the total number of scholarship recipients reported car ownership. There was no significant difference between car ownership and graduation.

TABLE 5

PER CENT OF EXPENSES TO BE PAID BY PARENTS OF 100 SCHOLARSHIP RECIPIENTS

| Per Cent of Expenses to be Paid by Parents | Graduates No. | Graduates Per Cent | Non-Graduates No. | Non-Graduates Per Cent | Total No. |
|---|---|---|---|---|---|
| 0% to 19% | 14 | 36 | 25 | 64 | 39 |
| 20% to 39% | 9 | 75 | 3 | 25 | 12 |
| 40% to 59% | 19 | 70 | 8 | 30 | 27 |
| 60% to 79% | 6 | 46 | 7 | 54 | 13 |
| 80% to 100% | 7 | 78 | 2 | 22 | 9 |

Significance was found when grade point average at termination was compared with whether a recipient graduated. The obtained Chi-Square was 27.392, as compared to Chi-Square at the .05 level of confidence of 14.067, and at the .01 level of 18.475. This was to be expected, since a minimum grade point average is necessary for graduation. The fact that nearly 70 per cent of the recipients who did not graduate ranked 2.1 or above, as seen in Table 6, speaks well for the academic ability of the total group.

Table 6 shows the grade point average of all the scholarship recipients at the termination of their studies.

This becomes more meaningful when combined with Table 7, which shows the total number of hours completed by all recipients. It may be observed that only 5, or 11 per cent of those who did not graduate completed more than 99 semester hours, while 66 per cent of the same group completed fewer than 60 hours.

TABLE 6

GRADE POINT AVERAGE OF 100 SCHOLARSHIP RECIPIENTS AT THE TERMINATION OF THEIR STUDIES

| Grade Point Average | Graduates No. | Graduates Per Cent | Non-Graduates No. | Non-Graduates Per Cent | Total No. |
|---|---|---|---|---|---|
| 0.0 to 0.5 | 0 | 0 | 3 | 100 | 3 |
| 0.6 to 1.0 | 0 | 0 | 0 | 0 | 0 |
| 1.1 to 1.5 | 0 | 0 | 4 | 100 | 4 |
| 1.6 to 2.0 | 0 | 0 | 7 | 100 | 7 |
| 2.1 to 2.5 | 8 | 42.1 | 11 | 57.9 | 19 |
| 2.6 to 3.0 | 17 | 58.6 | 12 | 41.4 | 29 |
| 3.1 to 3.5 | 21 | 77.8 | 6 | 22.2 | 27 |
| 3.6 to 4.0 | 9 | 81.8 | 2 | 18.2 | 11 |

In Appendix A may be found tables comparing the decile rank of all scholarship recipients on OSPE and IHSC and persistence to graduation. The OSPE total scores did not differ significantly between the graduate group and the non-graduates. In comparison of the IHSC, however, and persistence to graduation, the obtained Chi-Square was 17.642.

Chi-Square at the .05 level of confidence was determined to be 16.919. This, of course, does indicate a significant difference at the .05 level of confidence. Also included is a persistence table, comparing raw score achievement on the University of Oklahoma Mathematics Test. In an analysis of this data it should be remembered that "during the years involved in this study the scholarship committee did not have OSPE and IHSC test scores available on scholarship applicants."[1] Considering this fact, and recalling that none of the recipients had a collegiate academic record to which reference could be made, it appears that the committee did a commendable job in selection of better qualified students.

Table 8 shows the college or school which each recipient indicated as his major academic interest area and the undergraduate college in which each recipient terminated his studies. No significant difference was found between intended major and graduation.

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[1]Interview with Dr. Glenn C. Couch, Dean of the University College, University of Oklahoma, June 14, 1961.

TABLE 7

TOTAL NUMBER OF SEMESTER HOURS COMPLETED AND GRADE POINT AVERAGE OF 100 SCHOLARSHIP RECIPIENTS

| Grade Point Average at Termination | Graduates | Non-Graduates | Semester Hours Completed | | | | |
|---|---|---|---|---|---|---|---|
| | | | 0-29 | 30-59 | 60-99 | 100-119 | 120-139 | 140 & above |
| 0.0 to 0.5 | 0 | 3 | 3 | | | | | |
| 0.6 to 1.0 | 0 | 0 | | | | | | |
| 1.1 to 1.5 | 0 | 4 | 1 | 1 | 1 | 1 | | |
| 1.6 to 2.0 | 0 | 7 | 3 | 1 | 1 | 1 | 1 | |
| 2.1 to 2.5 | 8 | 11 | 2 | 6 | 2 | 5 | 4 | |
| 2.6 to 3.0 | 17 | 12 | 3 | 6 | 2 | 7 | 11 | |
| 3.1 to 3.5 | 21 | 6 | 2 | 1 | 3 | 18 | 3 | |
| 3.6 to 4.0 | 9 | 2 | | 1 | 1 | 3 | 6 | |

TABLE 8

INTENDED MAJOR COLLEGE AS COMPARED TO COLLEGE OF LAST ENROLLMENT OF 100 SCHOLARSHIP RECIPIENTS

| Intended Major College | Graduates | Non-Graduates | College of Last Enrollment | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | A & S | Bus. | Ed. | Engr. | F A | U C | Total N |
| Arts & Sciences | 22 | 11 | 17 | 2 | 4 | 1 | | 9 | 33 |
| Business | 5 | 10 | 1 | 6 | 3 | | | 5 | 15 |
| Education | 5 | 4 | 1 | | 6 | | | 2 | 9 |
| Engineering | 20 | 16 | 1 | 2 | 1 | 23 | | 9 | 36 |
| Fine Arts | 3 | 3 | 1 | | | | 5 | | 6 |
| Pharmacy | 0 | 1 | | | | | | 1 | 1 |
| | | | 21 | 10 | 14 | 24 | 5 | 26 | 100 |

## CHAPTER IV

## COMPARISONS BETWEEN SCHOLARSHIP RECIPIENTS AND OTHER FRESHMAN CLASSES

Although a large amount of the information gathered for use in describing the scholarship recipients in this study was relevant only to that particular group, some of the data lent itself quite well to comparisons between the scholarship group and other freshman classes at the University of Oklahoma. One particularly fine comparison was between the scholarship group and the freshman classes of 1952, '56, and '57, in regard to their performances on the OSPE, the IHSC, and the Oklahoma University Mathematics examinations. Performance of the freshman classes used in this chapter was obtained from A Longitudinal and Predictive Study of the Freshman Class of 1952.[1] These comparisons, as seen in Tables 9, 10, and 11, show that the scholarship recipients, as a total group, rank considerably higher on these three measures. These results are, of course, to be expected; however, it must be remembered that the scholarship committee did not have the results of these examinations when consideration of scholarship applicants was made.

[1]University of Oklahoma Guidance Service, etc., loc. cit.

TABLE 9

PERFORMANCE ON THE UNIVERSITY OF OKLAHOMA MATHEMATICS EXAMINATION OF THREE FRESHMAN CLASSES AS COMPARED TO 100 SCHOLARSHIP RECIPIENTS

| Raw Score | Per Cent of Each Group Scoring Within Each Category | | | |
|---|---|---|---|---|
| | 1952 (N=1829) | 1956 (N=2261) | 1957 (N=2181) | Scholarship Recipients (N=100) |
| Very Superior 32-40 | 3% | 3% | 4% | 12% |
| Superior 24-31 | 11% | 12% | 13% | 20% |
| Above Average 16-23 | 19% | 24% | 22% | 25% |
| Average 8-15 | 40% | 33% | 36% | 28% |
| Below Average 0-7 | 23% | 27% | 24% | 15% |
| (No Data) | 4% | 1% | 1% | 0% |
| | 100% | 100% | 100% | 100% |

The 1952 study reported that five years after the freshman class of 1952 entered the University, 34 per cent had graduated and one per cent was still in school, not yet having graduated. Sixty-five per cent were out of school and did not graduate. Assuming that the one per cent went on to graduate, a grand total of 35 per cent of the 1952 freshman class would have graduated. The scholarship recipients described in this study were beginning freshmen in the fall of 1955 and 1956. At the time this study was made, which was also approximately five years after date of matric-

ulation, 55 per cent have graduated from the University. This means that over 20 per cent more of the scholarship group persisted to graduation than did the freshmen of the fall of 1952.

TABLE 10

PERFORMANCE ON THE OSPE OF THREE FRESHMAN CLASSES AS COMPARED TO 100 SCHOLARSHIP RECIPIENTS

| Academic Aptitude Defined by OSPE Score | Per Cent of Each Group Scoring Within Each Category | | | |
|---|---|---|---|---|
| | 1952 (N=1829) | 1956 (N=2261) | 1957 (N=2181) | Scholarship Recipients (N=100) |
| Superior (deciles 10 & 9) | 12% | 12% | 13% | 25% |
| Above Average (deciles 8 & 7) | 16% | 18% | 18% | 23% |
| Average (deciles 6 & 5) | 22% | 24% | 25% | 35% |
| Below Average (deciles 4 & 3) | 21% | 21% | 19% | 7% |
| Inferior (deciles 2 & 1) | 26% | 24% | 23% | 10% |
| (No Data) | 3% | 1% | 2% | 0% |
| | 100% | 100% | 100% | 100% |

TABLE 11

PERFORMANCE ON THE IHSC OF THREE FRESHMAN CLASSES AS COMPARED TO 100 SCHOLARSHIP RECIPIENTS

| Retention of Content Learned in High School | Per Cent of Each Group Scoring Within Each Category | | | |
|---|---|---|---|---|
| | 1952 (N=1829) | 1956 (N=2261) | 1957 (N=2181) | Scholarship Recipients (N=100) |
| Superior (deciles 10 & 9) | 16% | 20% | 19% | 39% |
| Above Average (deciles 8 & 7) | 16% | 16% | 16% | 28% |
| Average (deciles 6 & 5) | 14% | 17% | 14% | 10% |
| Below Average (deciles 4 & 3) | 19% | 19% | 19% | 11% |
| Inferior (deciles 2 & 1) | 31% | 27% | 31% | 12% |
| (No Data) | 4% | 1% | 1% | 0% |
| | 100% | 100% | 100% | 100% |

# CHAPTER V

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

## Summary

The purpose of this study was to determine whether, among scholarship recipients, there were certain characteristics possessed by those who graduated as compared to those who did not graduate. Specifically, the study attempted to answer the following questions:

1. Do male or female scholarship recipients persist longer in school?

2. Do recipients whose family's income is in the upper or high range persist in school longer than those whose family's income is in the lower or middle range?

3. Do students who had been gainfully employed during a twelve-month period prior to their application for scholarship persevere in school longer than those who have not worked?

4. Do recipients whose fathers are employed in professional or managerial occupations stay in school longer than those whose fathers are in unskilled occupations?

5. Does the percentage of the recipient's expenses to be paid for by the parents tend to have a bearing on

academic rank and persistence?

The Chi-Square statistical test for independence was used to test the significance of the frequencies existing between the graduates and non-graduates, and the total group.

Tables were constructed which showed the frequencies and percentages of each category which was determined to be significant.

## Findings

The findings of this investigation, which are listed below, are based on the analysis of characteristics and academic achievement of scholarship recipients:

1. Fifty-five per cent of the total group of recipients graduated from the University of Oklahoma.

2. A significant difference at the .05 level of confidence was found when a comparison was made between the size of high school from which the recipients graduated, and persistence to graduation from the University.

3. When the recipient's anticipated yearly income from gainful employment while attending college was compared with persistence to graduation, a significant difference was found at the .05 level of confidence. In general, as anticipated earnings increased, the percentage of graduates decreased. An extremely high percentage (70 per cent) of the scholarship recipients who indicated that they intended to

be gainfully employed while attending college, but who did not know how much they expected to earn, did not graduate from the University.

4. When comparison was made between the graduates and non-graduates in regard to the per cent of college expenses which they reported were to be paid by their parents, a significance was found at the .05 level of confidence. More than 50 per cent of the non-graduate group stated that their parents would provide less than 20 per cent of their college expenses.

5. At the termination of their undergraduate studies at the University of Oklahoma, the scholarship recipients as a group ranked quite high academically. Eighty-six per cent of the total group had maintained at least a 2.1 grade point average. Of the non-graduate group, nearly 70 per cent had attained that level.

6. A significance at the .05 level of confidence was found when the graduate group was compared with the non-graduate group in regard to results obtained on the IHSC examination. Over 76 per cent of the graduates ranked in the upper four deciles of the examination.

7. In comparing male and female recipients, it was found that 53.6 per cent of the males graduated, and 56.8 per cent of the females graduated. No significant difference, at the .05 level of confidence, was in evidence. Other characteristics of the scholarship recipients, which were

also tested by the Chi-Square test for independence and found to be not significant at the .05 level of confidence, were as follows:

a. Age at matriculation and persistence to graduation

b. Father living and persistence to graduation

c. Father's occupation and persistence to graduation

d. Either parent former University of Oklahoma student and persistence to graduation

e. Size of high school and college grades

f. Working prior to college and persistence to graduation

g. Gainful employment in college and persistence to graduation

h. Total family income and persistence to graduation

i. Other family members dependent on family income attending school and persistence to graduation

j. Mother's occupation and persistence to graduation

k. Car ownership and persistence to graduation

l. Intended major college and persistence to graduation

m. OSPE total score and persistence to graduation

## Conclusions

On the basis of the findings of this study, it was possible to set forth certain general conclusions.

1. The scholarship students persisted to graduation

at a much higher rate (20 per cent more) than a typical freshman class.

2. The recipients who anticipated higher earnings from gainful employment while attending college did not persevere to graduation at as high a rate as those who did not expect to earn much.

3. The scholarship students ranked considerably higher on OSPE, IHSC, and University of Oklahoma Mathematics examinations than did the typical freshman classes.

4. In general, as anticipated earnings from outside employment while in college increased, the percentage of students who persevered to graduation decreased.

5. Nearly 60 per cent of the non-graduates of the group studied had stated that their parents would provide less than 20 per cent of their college expenses.

6. Eighty-six per cent of the total scholarship group had maintained an academic average of over 2.0 at the time of their last enrollment in the University.

7. The majority (66 per cent) of the non-graduate recipients completed fewer than 60 semester hours of college at the University of Oklahoma.

8. Considering the amount and type of information available to the Scholarship Committee, it was concluded that the Committee did a commendable job of selection.

## Recommendations

1. It is recommended that a study be made of the recipients who failed to complete their studies at the University of Oklahoma to determine the reasons for the drop out and to discover if additional scholarship funds would have enabled the students to remain in school.

2. It is recommended that more complete and accurate records be kept of all scholarship recipients so as to facilitate further study in this area.

3. Due to the fact that a much higher percentage (25 per cent) of those whose parents had attended the University of Oklahoma graduated, it is recommended that in the future the educational level of parents be ascertained and some consideration be given to this factor.

4. It is recommended that the Scholarship Committee at the University of Oklahoma investigate the services provided by the College Scholarship Service in an effort to receive an accurate and complete evaluation of the prospective recipient's financial ability to finance his education.

5. It is recommended that the Scholarship Committee, in future evaluations of prospective recipients, pay particular attention to the items found significant in this study.

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# APPENDIX

TABLE 12

RESULTS OF CHI-SQUARE TEST OF SIGNIFICANCE

| Variables | Obtained Chi-Square | Chi-Square .05 | Significance |
|---|---|---|---|
| Age at Matriculation - Persistence to Graduation | 6.765 | 7.815 | Not Significant |
| Sex - Persistence to Graduation | .105 | 3.841 | Not Significant |
| Father Living or Deceased - Persistence to Graduation | .149 | 3.841 | Not Significant |
| Father's Occupation - Persistence to Graduation | 7.747 | 12.592 | Not Significant |
| Mother's Occupation - Persistence to Graduation | 2.253 | 11.070 | Not Significant |
| Either Parent a Former OU Student - Persistence to Graduation | 1.604 | 3.841 | Not Significant |
| Size of High School - College Grades | 40.937 | 49.8 | Not Significant |
| Gainful Employment While Attending College - Persistence to Graduation | 1.355 | 3.841 | Not Significant |
| Total Family Income - Persistence to Graduation | 1.310 | 7.815 | Not Significant |
| Number of Other Family Members Dependent on Income Attending School - Persistence to Graduation | 9.07 | 12.59 | Not Significant |
| Car Ownership - Persistence to Graduation | .087 | 3.841 | Not Significant |
| Intended College Major - Persistence to Graduation | 8.621 | 14.067 | Not Significant |

TABLE 12 -- Continued

| Variables | Obtained Chi-Square | Chi-Square .05 | Significance |
|---|---|---|---|
| Working Prior to College - Persistence to Graduation | 10.469 | 11.070 | Not Significant |
| OSPE Total Scores - Persistence to Graduation | 11.69 | 16.91 | Not Significant |

TABLE 13

OHIO STATE PSYCHOLOGICAL EXAMINATION TOTAL TEST SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 8 | 3 | 11 |
| 9 | 7 | 7 | 14 |
| 8 | 7 | 3 | 10 |
| 7 | 8 | 5 | 13 |
| 6 | 8 | 8 | 16 |
| 5 | 6 | 13 | 19 |
| 4 | 4 | 0 | 4 |
| 3 | 2 | 1 | 3 |
| 2 | 5 | 4 | 9 |
| 1 | 0 | 1 | 1 |
| | 55 | 45 | 100 |

TABLE 14

OHIO STATE PSYCHOLOGICAL READING EXAMINATION
TEST SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 7 | 5 | 12 |
| 9 | 15 | 7 | 22 |
| 8 | 9 | 10 | 19 |
| 7 | 7 | 4 | 11 |
| 6 | 2 | 3 | 5 |
| 5 | 9 | 7 | 16 |
| 4 | 1 | 1 | 2 |
| 3 | 2 | 1 | 3 |
| 2 | 3 | 4 | 7 |
| 1 | 0 | 3 | 3 |
| | 55 | 45 | 100 |

TABLE 15

IOWA HIGH SCHOOL CONTENT EXAMINATION
TOTAL SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 12 | 4 | 16 |
| 9 | 14 | 9 | 23 |
| 8 | 9 | 8 | 17 |
| 7 | 7 | 4 | 11 |
| 6 | 2 | 2 | 4 |
| 5 | 2 | 4 | 6 |
| 4 | 1 | 6 | 7 |
| 3 | 3 | 1 | 4 |
| 2 | 4 | 2 | 6 |
| 1 | 1 | 5 | 6 |
| | 55 | 45 | 100 |

TABLE 16

IOWA HIGH SCHOOL ENGLISH CONTENT EXAMINATION
SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 17 | 3 | 20 |
| 9 | 12 | 8 | 20 |
| 8 | 4 | 6 | 10 |
| 7 | 6 | 9 | 15 |
| 6 | 5 | 5 | 10 |
| 5 | 3 | 4 | 7 |
| 4 | 5 | 1 | 6 |
| 3 | 2 | 3 | 5 |
| 2 | 1 | 6 | 7 |
| 1 | | | |
| | 55 | 45 | 100 |

TABLE 17

IOWA HIGH SCHOOL MATH CONTENT EXAMINATION
SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 19 | 13 | 32 |
| 9 | 8 | 5 | 13 |
| 8 | 4 | 4 | 8 |
| 7 | 7 | 2 | 9 |
| 6 | 5 | 3 | 8 |
| 5 | 0 | 4 | 4 |
| 4 | 4 | 2 | 6 |
| 3 | 2 | 3 | 5 |
| 2 | 4 | 6 | 10 |
| 1 | 2 | 3 | 5 |
| | 55 | 45 | 100 |

TABLE 18

IOWA HIGH SCHOOL HISTORY CONTENT EXAMINATION
SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 8 | 3 | 11 |
| 9 | 6 | 4 | 10 |
| 8 | 10 | 2 | 12 |
| 7 | 11 | 11 | 22 |
| 6 | 3 | 8 | 11 |
| 5 | 5 | 5 | 10 |
| 4 | 4 | 3 | 7 |
| 3 | 3 | 2 | 5 |
| 2 | 3 | 1 | 4 |
| 1 | 2 | 6 | 8 |
| | 55 | 45 | 100 |

TABLE 19

IOWA HIGH SCHOOL SCIENCE CONTENT EXAMINATION SCORES BY DECILES

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 10 | 17 | 9 | 26 |
| 9 | 8 | 7 | 15 |
| 8 | 8 | 4 | 12 |
| 7 | 3 | 2 | 5 |
| 6 | 2 | 5 | 7 |
| 5 | 3 | 2 | 5 |
| 4 | 2 | 7 | 9 |
| 3 | 3 | 3 | 6 |
| 2 | 7 | 4 | 11 |
| 1 | 2 | 2 | 4 |
| | 55 | 45 | 100 |

TABLE 20

UNIVERSITY OF OKLAHOMA MATH EXAMINATION
RAW SCORE

| Test Score | Graduates | Non-Graduates | Total N |
|---|---|---|---|
| 0 - 9 | 11 | 14 | 25 |
| 10 - 19 | 18 | 10 | 28 |
| 20 - 29 | 18 | 14 | 32 |
| 30 - up | 8 | 7 | 15 |
| | 55 | 45 | 100 |