

AN ANALYSIS OF THE ACADEMIC SUCCESS OF  
SCHOLARSHIP STUDENTS AT KANSAS STATE  
TEACHERS COLLEGE, EMPORIA, 1954 TO 1958

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A Thesis  
Presented to  
the Faculty of the Division of Teacher Education  
Kansas State Teachers College, Emporia

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In Partial Fulfillment  
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Master of Science

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by  
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ACCEPTED

The writer  
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## CHAPTER I

### INTRODUCTION

Scholarship programs in the colleges and universities are becoming increasingly important in the nation's educational system. The increase in the number of scholarships that are granted each year to undergraduates is an indication of the important role that these programs perform in higher education.<sup>1</sup>

Each year, since 1954, Kansas State Teachers College, Emporia, has expanded its scholarship program so that more intellectually talented high school seniors could obtain a college education. This continued growth gave rise to the need for a thorough analysis of the program.

#### I. THE PROBLEM

Statement of the problem. It was the purpose of this study to determine the academic achievement of the scholarship students attending Kansas State Teachers College. More specifically, the objectives were to answer these questions:

1. Did the selection committee choose a superior group of students in terms of academic record?
2. Does the academic record established by the students justify their being recipients of scholarships?

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<sup>1</sup>Walter S. Monroe, Encyclopedia of Educational Research (New York: The MacMillan Company, 1950), p. 1347.

Importance of the study. The fact that research was needed on the scholarship program at Kansas State Teachers College was indicated when it was found that no objective appraisal of the program had ever been made. A desire for such research was expressed by certain members of the administration and faculty of the college who were concerned with proper and efficient functioning of the program.

## II. DEFINITIONS OF TERMS USED

The following words and phrases will appear frequently in this report. It is necessary that they be given definite individual meanings or definitions.

Scholarship. S. N. Feingold states that a scholarship is "a financial grant which does not involve repayment."<sup>2</sup>

Grade point average. A numerical quantity which refers to the average grade the student received during a stated period of time. The following is the grade point designation for each semester hour of credit.

A = 4 grade points  
 B = 3 grade points  
 C = 2 grade points  
 D = 1 grade point  
 F = 0 grade points

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<sup>2</sup>S. N. Feingold, Scholarships, Fellowships, and Loans (Boston: Bellman Publishing Company, Inc., 1951), p. 13.

Percentile score. A point in a column of numbers below which a given percentage of scores fall.<sup>3</sup>

General ability score. This phrase may be interpreted as referring to the score, on a percentile basis, which the scholarship student received on the Kansas High School Senior Comprehensive Examination, general ability section.

Achievement score. This term refers to the score, on a percentile basis, which the student received on the content portion of the Kansas High School Senior Comprehensive Examination.

### III. SCOPE OF THE PROBLEM

This study was limited to a period between September, 1954, and May, 1959. The most important factor in this limitation imposed on the study is that prior to 1954, very few records were kept pertaining to the individual scholarship students. For that reason, it was not feasible to include recipients prior to that date.

This study was also limited to those students who received scholarships actually granted by the Scholarship Committee. Students receiving scholarships granted by outside agencies or individuals were not included in the study.

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<sup>3</sup>John W. Best, Research in Education (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1959), p. 214.



## CHAPTER II

### REVIEW OF THE LITERATURE

The most common type of literature concerning scholarships is that devoted to an enumeration and description of the scholarships available. This is generally in the form of a handbook or guide for use in counseling students who are searching for scholarship aid.

Two examples which are representative of this literature will be reviewed. An excellent bulletin, published by the United States Office of Education, is entitled Scholarships and Fellowships Available at Institutions of Higher Learning.<sup>4</sup> This booklet, though nine years old, provides a summation of the number of scholarships and the amounts of the awards. Another source of information is Scholarships, Fellowships, and Loans, prepared by Feingold.<sup>5</sup> It is most helpful to the individual in need of scholarship aid.

The philosophies which influence the granting of student aid have been the subject of many articles. Such

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<sup>4</sup>United States Office of Education, Scholarships and Fellowships Available at Institutions of Higher Education. Bulletin No. 16 (Washington: Government Printing Office, 1951).

<sup>5</sup>Feingold, loc. cit.

material has little relationship to the purpose of this study; therefore no mention will be made of these particular reports.

An indication of the importance of scholarships to the nation's youth is expressed by Lindsay.<sup>6</sup> In 1900, 11 percent of these youth attended high school and 4 per cent of this group went on to college. In 1956, 80 per cent of the nation's youth attended high school and 31 per cent went on to college. There were still 100,000 qualified high school seniors who did not go to college because of inadequate finances.

Not all of these students would have gone to college even if they had been offered scholarships. It is believed that many of them would have gone, however, if given the opportunity.<sup>7</sup>

Current practices of awarding scholarships was the primary concern of H. M. Boodish.<sup>8</sup> He felt that selection committees should award financial aid to those students who (1) need it, and (2) have the aptitude for college. He felt

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<sup>6</sup>Kenneth Lindsay, "American Higher Education: Scholarships and the Forgotten Students," Times Educational Supplement, 2160:1219, October 12, 1956.

<sup>7</sup>Ibid.

<sup>8</sup>H. M. Boodish, "Correcting a Weakness in Scholarship Awards," Social Studies, 46:306, December, 1955.

that far too many scholarships were awarded on the basis of class scholastic standing or on scores obtained on competitive examinations. Boodish stated that:

This is a weakness in the scholarship programs in that it reduces the funds that might otherwise be available for boys and girls who have the aptitude but not the financial means to go to college.<sup>9</sup>

One of the functions in the selection of scholarship recipients is that of predicting their success as students. This matter of predicting success was the topic of a study on which Garrett reported.<sup>10</sup> Though he was not concerned with scholarship awards, his study does contribute to the general area of selection.

Garrett found that high school grades correlate more highly with freshman college grades than with grades of any other level. This study indicated that high school grades in specific subjects had little relation to grades of similar courses in college.

Garrett also found that intelligence scores for women were correlated more closely with college success than are the scores of men. The American Council on Education Psychological Examination correlated more closely with

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<sup>9</sup>Ibid.

<sup>10</sup>Henry E. Garrett, "A Review and Interpretation of Investigations of Factors Related to Scholastic Success in Colleges of Arts and Sciences and Teachers Colleges," Journal of Experimental Education, 18:91, December, 1949.

College grade averages than did the scores of other intelligence tests.<sup>11</sup>

Garrett concluded his study by stating that:

This data reveals that many colleges are basing their entrance requirements on factors which do not have adequate value in predicting success in college, and therefore deny entrance to many students who should be admitted.<sup>12</sup>

The results of this study may be applied to the selection processes of a scholarship committee. There is considerable evidence to support the fact that committees use, as selection criteria, standing in the graduating class or the results of competitive examinations. These data are used, in many instances, as the sole basis of selection.

Clark, Wright, and Parker were concerned with the question whether renewable scholarships created sufficient motivation to achieve a higher academic record, on the part of scholarship students, than the record of achievement made by non-scholarship students.<sup>13</sup> Two experimental groups were chosen, including recipients of scholarships at Brigham Young University. Two more groups were selected containing non-recipients, to be compared with the experimental group.

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<sup>11</sup>Ibid., pp. 128-129.

<sup>12</sup>Ibid., p. 130.

<sup>13</sup>Selby G. Clark, Wayne E. Wright, and Clyde A. Parker, "Do Renewable Scholarships Promote Higher Grades?" Personnel and Guidance Journal, 35:302, January, 1957.

The purpose of the study was to determine the differences between grade point averages of the scholarship recipients and the non-recipients.

The results proved to be significant, in that there were obvious differences between the groups. The writers reported that:

This study seems to indicate that sufficient additional extrinsic motivation can be produced in scholarship students through the rewarding of a renewable-type scholarship to produce a significant change in effort which results in significantly higher college grades.<sup>14</sup>

Crawford was one of the first persons to report on research made of scholarship programs.<sup>15</sup> The students were those attending Yale University in 1926. Crawford equated two groups, recipients and non-recipients, in the basis of intelligence test scores and academic records. He found that 75 per cent of the scholarship group exceeded the median of the non-recipients. He concluded that the difference was due to the motivation of the scholarships.

Moon reported in 1930 on a study made of scholarship students at the University of Chicago.<sup>16</sup> In this research,

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<sup>14</sup>Ibid., pp. 305-306.

<sup>15</sup>A. B. Crawford, Incentives to Study (New Haven: Yale University Press, 1929), 94 pp.

<sup>16</sup>G. R. Moon, "Records of Students Who Entered the University with Freshman Scholarships," The School Review, 38:443, June, 1930.

he studied two different groups of scholarship recipients; the first group were the "Honor-Entrance" scholars and the second group were the "Competitive-Examination" scholarship students.

The freshmen grades of the recipients were evaluated and the two groups were compared. The highest mean grade point average had been maintained by the "Competitive-Examination" scholars. The "Honor-Entrance" scholars still maintained a higher grade point average than that of the freshman class.

In every instance of comparison, the "Competitive-Examination" students excelled the "Honor-Entrance" scholars and both excelled the general student body.<sup>17</sup>

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<sup>17</sup>Ibid., p. 449.

## CHAPTER III

### GENERAL DESCRIPTION OF THE SCHOLARSHIP STUDENT POPULATION

This chapter is a discussion of some general characteristics of the total scholarship student population. It will consider the sex of the recipients, the location of their home-towns, and their major fields of study.

The number of persons included in this report is 453. Only 33 per cent of the total population, or 151 students, were male. There were 302 female scholarship students, or 67 per cent.

The difference between the number of male and female recipients is more evident in Table I. In 1954, 43.5 per cent of the recipients were male, compared to the 56.5 per cent that were female. Throughout the five-year period the per cent of female students has increased. In 1958, the number of male scholarship students was only 30 per cent of the total recipients for that year.

The total number of scholarship students has increased each year. In 1954, 67 students received scholarships granted by the Scholarship Committee at Kansas State Teachers College, Emporia. This number had increased to 130 in the fall of 1958. While the difference between the number of male and female recipients was increasing, the total number of

TABLE I  
 NUMBER AND PERCENT OF SCHOLARSHIP  
 STUDENTS BY SEX AND YEAR

Sex	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Male	29	43.5	17	24.2	30	35.8	36	35.3	39	30.0
Female	38	56.5	53	75.8	54	64.2	66	64.7	91	70.0
Total	67	100.0	70	100.0	84	100.0	102	100.0	130	100.0

NOTE: This table should be read as follows: In 1954, there were 29 male scholarship students, or 43.5 per cent.



recipients was also increasing, indicating an expansion of the scholarship program with each ensuing year.

The data with regard to the areas in which the scholarship students' homes are located are presented in Table II and Table III. Table II, a map of the state of Kansas, is divided into the six United States Congressional Districts. This was done so that the areas represented by the districts would be nearly equal in population.

Table III shows the districts in which the homes of the scholarship students were located. More students' homes were located in District Four than in any other district. Throughout the five-year period, there were 168 scholarship students from this district. This number is 37 per cent of the total population. District Five, the southwest portion of Kansas, was the location of the homes of nearly 25 per cent of the students; while District Three, in southeast Kansas, contained the least amount of hometowns with only 4 per cent.

With one exception, the per cent of recipients from each district tended to remain fairly stable. In 1954, more than one-half of the students' homes were located in District Four. This figure decreased with each fall semester.

Only one scholarship student's home was located outside the state of Kansas. This will not occur very often, since the majority of the scholarships that are available

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MAP OF THE STATE OF KANSAS DIVIDED INTO THE SIX UNITED STATES CONGRESSIONAL DISTRICTS

TABLE II

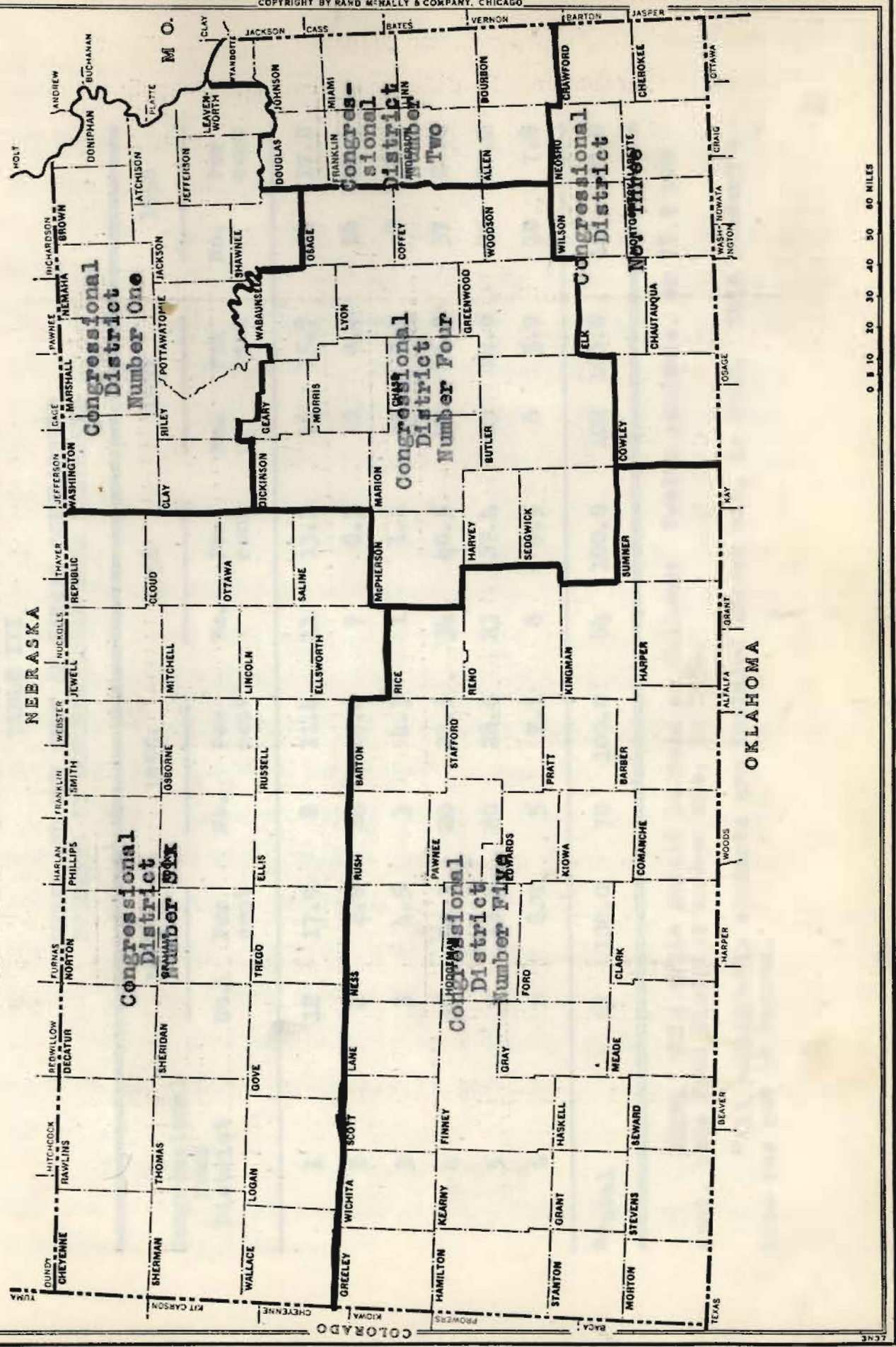


TABLE III

## NUMBER AND PER CENT OF KANSAS SCHOLARSHIP STUDENTS BY CONGRESSIONAL HOME DISTRICTS

Congressional Home District	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
1	12	17.9	8	11.4	11	13.1	16	15.7	23	17.8
2	2	2.9	14	20.0	7	8.3	10	9.8	16	12.4
3	3	4.5	3	4.3	1	1.2	3	2.9	8	6.2
4	35	52.3	20	28.6	34	40.5	42	41.2	37	28.6
5	9	13.5	20	28.6	23	27.4	25	24.5	35	27.2
6	6	8.9	5	7.1	8	9.5	6	5.9	10	7.8
*Total	67	100.0	70	100.0	84	100.0	102	100.0	129	100.0

NOTE: This table should be read as follows: Twelve students, or 17.9 per cent, came from district number one, in 1954.

\*All scholarship students are included except one, in 1958. This student's home was not in Kansas.

at Kansas State Teachers College, Emporia, are intended for Kansas high school graduates.

The major fields of study, as indicated by the female scholarship students, are presented in Table IV. There were 96 female recipients, or 32 per cent of the total female population, who chose elementary education as their major field. The field of English was chosen by 39 recipients, or 13 per cent. Business, home economics, and music were the next most frequent choices made by the female group.

It may be noted that while the per cent of female students who indicated elementary education as the major field of study increased, the per cent in most of the other areas remained stable or decreased. This trend, however slight, is an indication of the increasing number of persons entering the field of elementary education.

The male scholarship students frequently indicated mathematics as their choice of a major field of study, as indicated in Table V. There were 26 men, or 17 per cent, who chose this area. Physical education was the second most frequent choice with nearly 13 per cent indicating this area. Business and physical science were nearly equal in frequency, as they were chosen by nearly 11 per cent of the male population.

There were only two male scholarship students that had not decided upon a major field. There were none among the female recipients.

TABLE IV

## MAJOR FIELD AS INDICATED BY FEMALE SCHOLARSHIP STUDENTS BY NUMBER AND PER CENT

Major Field	1954		1955		1956		1957		1958	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Art	0	0	2	3.8	0	0	1	1.5	0	0
Biology	0	0	1	1.9	0	0	0	0	2	2.2
Business	8	21.1	5	9.4	8	14.8	6	9.1	6	6.6
Business Education	1	2.6	3	5.6	1	1.8	1	1.5	3	3.3
Elementary Education	10	26.2	17	32.1	18	33.5	20	30.2	31	34.1
English	0	0	4	7.6	7	13.0	14	21.2	14	15.3
Foreign Language	0	0	0	0	1	1.8	1	1.5	3	3.3
Home Economics	3	7.9	6	11.3	4	7.4	4	6.1	9	9.9
Industrial Arts	0	0	0	0	0	0	0	0	0	0
Library Science	1	2.6	0	0	1	1.8	1	1.5	1	1.1

TABLE IV (continued)

## MAJOR FIELD AS INDICATED BY FEMALE SCHOLARSHIP STUDENTS BY NUMBER AND PER CENT

Major Field	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Mathematics	1	2.6	2	3.8	0	0	2	3.0	6	6.6
Music	6	15.8	3	5.6	3	5.6	4	6.1	6	6.6
Physical Education	5	13.2	3	5.6	2	3.7	1	1.5	2	2.2
Physical Science	1	2.6	2	3.8	1	1.8	1	1.5	1	1.1
Pre-Nursing	2	5.4	1	1.9	3	5.6	2	3.0	0	0
Psychology	0	0	0	0	0	0	0	0	2	2.2
Secretarial Training	0	0	2	3.8	2	3.7	0	0	0	0
Social Science	0	0	0	0	1	1.8	4	6.1	4	4.4
Speech	0	0	2	3.8	2	3.7	4	6.1	1	1.1
Total	38	100.0	53	100.0	54	100.0	66	100.0	91	100.0

NOTE: This table should be read as follows: Six female students, or 15.8 per cent, indicated their major field as music, in 1954.

TABLE V

## MAJOR FIELD AS INDICATED BY MALE SCHOLARSHIP STUDENTS BY NUMBER AND PER CENT

Major Field	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Art	0	0	0	0	0	0	0	0	0	0
Biology	0	0	0	0	2	6.7	2	5.6	1	2.6
Business	5	17.2	2	11.8	3	10.0	4	11.1	2	5.1
Business Education	1	3.5	2	11.8	2	6.7	0	0	1	2.6
Elementary Education	1	3.5	1	5.9	0	0	0	0	0	0
English	2	6.9	0	0	2	6.7	0	0	3	7.7
Foreign Language	1	3.5	0	0	0	0	0	0	0	0
Home Economics	0	0	0	0	0	0	0	0	0	0
Industrial Arts	2	6.9	0	0	2	6.7	3	8.3	2	5.1
Library Science	0	0	0	0	0	0	0	0	0	0

TABLE V (continued)

## MAJOR FIELD AS INDICATED BY MALE SCHOLARSHIP STUDENTS BY NUMBER AND PER CENT

Major Field	1954		1955		1956		1957		1958	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Mathematics	2	6.9	4	23.4	6	20.0	5	13.8	9	23.0
Music	1	3.5	3	17.6	1	3.3	1	2.8	1	2.6
Physical Education	4	13.6	2	11.8	3	10.0	5	13.8	5	12.8
Physical Science	2	6.9	2	11.8	4	13.3	4	11.1	5	12.8
Pre-Engineering	5	17.2	0	0	1	3.3	4	11.1	0	0
Pre-Medicine	0	0	0	0	1	3.3	2	5.6	0	0
Psychology	0	0	0	0	0	0	0	0	0	0
Social Science	2	6.9	0	0	2	6.7	3	8.3	4	10.3
Speech	1	3.5	1	5.9	1	3.3	2	5.6	5	12.8
Undecided	0	0	0	0	0	0	1	2.8	1	2.6
Total	29	100.0	17	100.0	30	100.0	36	100.0	39	100.0

NOTE: This table should be read as follows: Four male students, 13.6 per cent, indicated their major field as physical education, in 1954.



The field of industrial arts was the only area not chosen by any of the female scholarship students. This is to be expected, since industrial arts is primarily a field for men.

The areas of art, home economics, library science, and psychology were not indicated by any of the male scholarship students as their field of study.

CHAPTER IV

AN ANALYSIS OF THE ACADEMIC PROGRESS  
OF THE SCHOLARSHIP STUDENTS

This chapter is a discussion of some academic characteristics of the scholarship student population. It will analyze the scores made by the recipients on the Kansas High School Senior Comprehensive Examination and the grades which these students have made while attending Kansas State Teachers College, Emporia.

The majority of students from Kansas high schools that apply for scholarships at Kansas State Teachers College, have taken the Kansas High School Senior Comprehensive Examination. The scores obtained from this examination are used by the Scholarship Committee as one criterion upon which the awarding of scholarships will be based. These scores are not used to a great extent as a basis for awarding scholarships to upper class students. The academic record which they have established in college is the basis for granting scholarships to them.

The Kansas High School Senior Comprehensive Examination consists of two tests, (1) the content test which provides an achievement score in percentiles, and (2) the Schrammel General Ability Test which provides a general ability score in percentiles.

Table VI presents the distribution of scores in percentiles which the scholarship students obtained on the content portion of the Kansas High School Senior Comprehensive Examination. There were ten students whose scores were not available. Six of the recipients were junior college transfer students. The remaining four were also upper class students, and no scores had been recorded in their records.

Nearly three-fourths of the total number of scholarship students ranked between the 80th and 99th percentile, inclusive. The exact figure is 73.3 per cent.

It might be expected that nearly all the scholarship recipients would obtain high scores on a high school achievement test. Below the 50th percentile, there were found to be 19 students, or 4.2 per cent. It may be stated that if only 4 per cent of the total group rank in the lower one-half of the distribution, the scholarship recipients are a superior group of students.

There were no scores on the same ten students on the general ability portion of the Kansas High School Senior Comprehensive Examination, as is presented in Table VII. The per cent of scholarship students ranking between the 80th and 99th percentile was less than on the achievement portion. The number of recipients in this category is 308, or 68 per cent of the total population.

TABLE VI

KANSAS HIGH SCHOOL SENIOR COMPREHENSIVE ACHIEVEMENT DISTRIBUTION  
FOR SCHOLARSHIP STUDENTS IN PERCENTILES BY NUMBER AND PER CENT

Percentile Range	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
90 - 99	22	32.8	33	47.1	41	48.7	51	49.7	65	50.0
80 - 89	25	37.2	11	15.7	19	22.3	32	31.1	33	25.4
70 - 79	6	8.9	12	17.2	10	11.9	12	11.7	9	6.9
60 - 69	5	7.5	3	4.3	10	11.9	3	3.1	9	6.9
50 - 59	5	7.5	4	5.8	1	1.3	1	1.1	3	2.3
40 - 49	1	1.5	1	1.4	2	2.6	2	2.2	0	0
30 - 39	3	4.6	4	5.7	0	0	0	0	1	0.8
20 - 29	0	0	1	1.4	0	0	1	1.1	0	0
10 - 19	0	0	1	1.4	1	1.3	0	0	0	0
*N. A.	0	0	0	0	0	0	0	0	10	7.7
Total	67	100.0	70	100.0	84	100.0	102	100.0	130	100.0
Median	86		88		89		90		90	

NOTE: This table should be read as follows: Twenty-two scholarship students, or 32.8 per cent, in 1954, scored between the 90th and 99th percentile on the Kansas High School Senior Comprehensive Achievement Test.

\*Scores not available.

TABLE VII

KANSAS HIGH SCHOOL SENIOR COMPREHENSIVE GENERAL ABILITY DISTRIBUTION  
FOR SCHOLARSHIP STUDENTS IN PERCENTILES BY NUMBER AND PER CENT

Percentile Range	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
90 - 99	24	35.8	28	40.2	31	36.9	50	48.8	68	52.3
80 - 89	14	20.8	14	20.0	16	19.0	33	32.2	30	23.1
70 - 79	10	14.9	10	14.2	13	15.4	8	7.8	11	8.4
60 - 69	6	9.0	5	7.2	13	15.4	3	3.1	6	4.6
50 - 59	8	12.0	8	11.4	4	4.8	5	5.0	2	1.5
40 - 49	2	3.0	1	1.4	6	7.2	1	1.1	1	0.8
30 - 39	3	4.5	1	1.4	0	0	2	2.0	1	0.8
20 - 29	0	0	2	2.8	0	0	0	0	1	0.8
10 - 19	0	0	1	1.4	1	1.3	0	0	0	0
*N. A.	0	0	0	0	0	0	0	0	10	7.7
Total	67	100.0	70	100.0	84	100.0	102	100.0	130	100.0
Median	85		86		85		88		91.5	

NOTE: This table should be read as follows: Twenty-four scholarship students or 35.8 per cent, in 1954, scored between the 90th and 99th percentile on the Kansas High School Senior Comprehensive General Ability Test.

\*Scores not available.

There were more students in the lower one-half of the distribution on this test than on the achievement test. Below the 50th percentile there were 23 recipients, or 5.1 per cent of the total group.

It may be noted that while the scholarship students as a group have ranked high on both sections of the Senior Comprehensive, the groups have improved each year. In 1954, the median score on the achievement section was the 86th percentile. On the general ability section, the median in 1954 was the 85th percentile and in 1958, the median was the 91.5 percentile. Each group, in general, has ranked higher than the one preceding it.

The data with regard to the freshman grade averages of the scholarship students are presented in Table VIII. One-fifth of the total maintained an average of 3.50 or more during their freshman year. Nearly one-half, or 49.8 per cent, maintained a grade point average of 3.00 or more. This is taken to mean that one-half of the total group of scholarship students established a grade average of at least a B.

There were 8 recipients who maintained a freshman grade average of less than a C. This number is only 1.8 per cent of the total group.

The distribution of the cumulative grade point averages is presented in Table IX. The cumulative grade point averages

TABLE VIII  
 FRESHMAN GRADE AVERAGE RANGE FOR SCHOLARSHIP  
 STUDENTS BY NUMBER AND PER CENT

Grade Average Range	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
3.75 -	2	3.0	7	10.0	6	7.2	9	8.8	19	14.6
3.50 -	2	3.0	9	12.8	11	13.1	15	14.7	15	11.5
3.25 -	6	8.9	10	14.3	8	9.5	12	11.8	14	10.8
3.00 -	12	17.9	14	20.0	14	16.7	19	18.6	21	16.2
2.75 -	15	22.5	9	12.8	18	21.3	15	14.7	28	21.5
2.50 -	12	17.9	9	12.8	12	14.1	17	16.6	17	13.1
2.25 -	10	14.9	5	7.2	9	10.7	8	7.8	8	6.2
2.00 -	8	11.9	4	5.8	4	4.8	6	5.9	6	4.6
1.75 -	0	0	2	2.9	1	1.3	1	1.1	2	1.5
1.50 -	0	0	1	1.4	1	1.3	0	0	0	0
Total	67	100.0	70	100.0	84	100.0	102	100.0	130	100.0
Median	2.79		3.06		2.95		3.03		3.00	

NOTE: This table should be read as follows: Twelve students, or 17.9 per cent, had a grade average between 3.00 and 3.24 in 1954.

TABLE IX  
 CUMULATIVE GRADE AVERAGE RANGE FOR SCHOLARSHIP  
 STUDENTS BY NUMBER AND PER CENT

Grade Average Range	1954		1955		1956		1957		1958	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
3.75 - 4.00	3	4.5	7	10.0	3	3.6	9	8.8	18	13.8
3.50 - 3.74	4	6.0	8	11.3	10	11.6	16	15.7	16	12.3
3.25 - 3.49	7	10.4	10	14.3	12	14.2	11	10.8	13	10.0
3.00 - 3.24	13	19.5	12	17.4	15	17.9	18	17.7	22	16.9
2.75 - 2.99	10	14.9	9	12.8	17	20.4	15	14.7	30	23.0
2.50 - 2.74	14	20.9	8	11.3	11	13.2	18	17.7	17	13.1
2.25 - 2.49	9	13.4	9	12.8	9	10.7	8	7.8	6	4.7
2.00 - 2.24	7	10.4	4	5.8	4	4.8	6	5.8	6	4.7
1.75 - 1.99	0	0	1	1.4	3	3.6	1	1.0	2	1.5
1.50 - 1.74	0	0	2	2.9	0	0	0	0	0	0
Total	67	100.0	70	100.0	84	100.0	102	100.0	130	100.0
Median	2.81		3.06		2.97		3.02		3.00	

NOTE: This table should be read as follows: Fourteen scholarship students, or 20.9 per cent, had a cumulative grade average between 2.50 and 2.74.



were determined by finding the arithmetic mean of the total points which the recipients had earned up to and including the spring semester of 1959. The majority of the cumulative grade point averages for 1958 were the same as the freshman grade point averages. The reason for this is that most of the group in 1958 were freshmen. Therefore, they had not established any other average except the grade point average. The differences that do exist in 1958 between Tables VIII and IX are due to the upper class students who were granted scholarships for that year.

The results of the cumulative grade point averages are very similar to the freshman grade point averages. There were 227 scholarship students who maintained a grade average of B or more through the spring of 1959. This number is 50 per cent of the total group. Likewise, only 2 per cent of the group established a grade average of less than a C.

The median cumulative grade point averages were nearly identical to the median freshman grade averages. In 1954, the median was 2.81 and in 1958, the median was 3.00.

It may be said that the students who received scholarships to Kansas State Teachers College were a superior group of students, academically. This statement may be justified by the fact that 83 per cent of the recipients,

compared with 50 per cent of the total student body, established a grade average of C+ or better.<sup>18</sup>

Since the Kansas High School Senior Comprehensive Examination is used as one criterion for granting awards, it was necessary to determine the predictive value of this test in relation to academic success. Table X presents the correlations made for this study.

TABLE X  
COEFFICIENTS OF CORRELATION

	General Ability	Cumulative Grade Point Average	Freshman Grade Point Average
Achievement	.688	.502	.473
Freshman Grade Point Average	.397	.915	—
Cumulative Grade Point Average	.392	—	—

NOTE: This table should be read as follows: The coefficient of correlation between the freshman grade point average and the cumulative grade point average is .915.

The correlations for this study were worked out, using Otis Correlation Charts. Otis stated that:

<sup>18</sup>Records of Kansas State Teachers College, Emporia; Office of the Registrar.

The coefficient by this chart is exactly the same to any number of decimal places as if calculated by the regular (Pearson) "product moment" formula.<sup>19</sup>

$$r = \frac{\sum xy}{\sqrt{\sum x^2 + \sum y^2}}$$

The correlation between the achievement scores on the Kansas High School Senior Comprehensive Examination and the general ability score from the same examination was .688. The probable error was 0.19. It may be said that there is a substantial relationship between the achievement and general ability scores on this examination.

The correlation between the achievement score and the cumulative grade point average is .502 with a PE<sub>r</sub> of .028. This indicates that there is a positive relationship between the two factors, but that it is only moderate.

From Table X, we find the correlation between the achievement score and the freshman grade point average to be .473 with the probable error of r to be .029. Again, even though a positive relationship exists, it is only moderate.

The correlation between the freshman grade point average and the general ability score was found to be .397 with a PE<sub>r</sub> of .031. From this, it may be deducted that a slight, positive relationship does exist between the two factors, but not to any great extent.

<sup>19</sup>Arthur S. Otis, Otis Correlation Chart Directions (New York: World Book Co., 1922), p. 1.

The calculated correlation between the cumulative grade point average and the general ability was .392 with a probable error of .031. The same relationship as exists with the preceding general ability correlation can be said of this one, that only a slight, but positive, relationship exists between them.

The final correlation that was made, between the cumulative grade point average and the freshman grade point average, was the only high positive coefficient in the group. This is to be expected, since a group will generally remain stable, academically, throughout college.

It can be assumed that the preceding correlations are worthy of confidence. This statement is based on the fact that Garrett, in his book, stated that, "It has been customary to regard a correlation coefficient worthy of confidence if it is at least four times its PE."<sup>20</sup> In every case, the above correlations have been significantly higher than their probable error.

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<sup>20</sup>Henry E. Garrett, Statistics in Psychology and Education (New York: Longmans, Green and Co., 1947), third edition, p. 298.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

This chapter will present a summary of the findings of this study and conclusions based on these findings. It will answer the questions previously stated in Chapter I concerning the objectives of this study.

#### I. SUMMARY OF THE FINDINGS

There were 453 scholarship students included in the study, from 1954 to 1958. Of this group, 33 per cent were male and 67 per cent were female.

In 1954, there were 67 recipients of scholarships attending Kansas State Teachers College. This number had increased to 130 students in September of 1958.

The six United States Congressional Districts were used as the basis in determining the locations of the homes of the recipients. As might be expected, more students' homes were located in District Four than in any other district. The southeast portion of Kansas, or District Three, contained the least number of home towns.

The major field most frequently chosen by the female scholarship students was elementary education, followed by English. The field of industrial arts was the only major area not indicated by the female group.

Mathematics was the most frequently indicated major area by the male recipients, followed by physical education. Art, home economics, library science, and psychology were not chosen by any of the male students.

It was found that 73.3 per cent of the total population ranked between the 80th and 99th percentile on the content portion of the Kansas High School Senior Comprehensive Examination. Below the 50th percentile, there were found to be 4.2 per cent of the total group.

Ten scholarship students' scores were not available in 1958. This figure is 7.7 per cent of the group awarded scholarships during that year.

The scores on the general ability section of the Kansas High School Senior Comprehensive Examination were somewhat lower than on the achievement portion. Of the total population, 68 per cent scored between the 80th and 99th percentile, while 5.1 per cent scored below the 50th percentile.

The median scores ranged from the 86th to the 90th percentile on the achievement section of the Kansas High School Senior Comprehensive Examination. The percentile range on the general ability was from 85 to 91.5 over the five year period.

Nearly one-half of all the recipients maintained a freshman grade average and a cumulative grade average of B

or more. This may be compared to the fact that 2 per cent established a grade point average of less than a C. It was found that 50 per cent of the student body maintained a cumulative grade average of C<sub>r</sub> or more while 83 per cent of the scholarship population maintained at least the same average.

This fact agrees with previously mentioned study by Crawford.<sup>21</sup> He found that 75 per cent of the scholarship group maintained a grade point average which exceeded the median of the non-recipient group.

From 1954 to 1958, the median freshman grade point averages ranged from 2.79 to 3.06. The median cumulative grade point averages were almost identical.

Of the correlations presented in Table X, the one between the freshman grade point average and the cumulative grade point average showed the only high, positive relationship in the group. It was found to be .915. The other correlations ranged from .392 to .688. In all cases, there was a relationship between the factors, but it was only moderate.

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<sup>21</sup>Crawford, loc. cit.

## II. CONCLUSIONS

The specific objectives of this research were initially stated as two questions. The conclusions of this report will be stated as answers to these questions.

Did the selection committee choose a superior group of students in terms of academic record? Yes, it was effective in selecting a group of superior scholarship students, in that the majority of the students selected did maintain a higher academic record than did the student body in general. However, it must be remembered that 17 per cent of the total scholarship population established a grade point average of less than a C+. An attempt should be made to reduce the number of students that fall into this group.

Does the academic record established by the students justify their being recipients of scholarships? With the exception of the group who maintained a grade average of less than a C+, the academic record established by the recipients does justify their being granted a scholarship. A student attending college on a scholarship is commonly thought of as a better student, academically, than the average student attending college without a scholarship.<sup>22</sup> It can be said with justification, that this is true, generally, at Kansas State Teachers College, Emporia.

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<sup>22</sup>Monroe, op. cit., p. 1348.



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