STUDIES IN EDUCATION

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Success and Failure of College Students

A Follow-up Study of the Freshmen Who Entered the Kansas State Teachers College of Emporia During the Years 1924 to 1929.

BY

H. E. SCHRAMMEL, Ph. D., *Director*
Bureau of Educational Measurements,
Kansas State Teachers College of Emporia

AND

E. R. WOOD, Ph. D.
Director Bureau of Educational Measurements,
Kansas State Teachers College of Emporia, 1924-1929
Director of Instructional Research,
State Department of Education,
Columbus, Ohio

EDITOR'S INTRODUCTION.

The rapid development of the public high school and the general demand that it serve equally well a dual function, that of preparing immediately for life work as well as preparing for college, have greatly increased the complexity of a problem which is challenging the best efforts of the educational world to-day. The problem is that involved in the articulation of secondary and higher education. The problem becomes more pressing and the need for a suggested solution becomes more imperative, when consideration is given to the fact that our high-school enrollment approximates four millions; that our college enrollment approaches the million mark; that some sixty thousand of the more than three hundred thousand who entered college as freshmen this fall will drop out during the year or at the end of it; and, that the new class of freshmen each fall exceeds that of the previous year, to some extent at least, in point of numbers.

Some of the problems suggested by the foregoing discussion, problems which are immediate and pressing in their nature, are:

1. On what basis or bases should students be admitted to college?
2. Should the principle of selectivity or universality in education be accepted as the ideal in a democracy?
3. Should college provide educational opportunity only for potential leaders?
4. Is there a place in the educational ladder where universality of training should leave off and selectivity begin?
5. Is a system of education democratic which on any level, elementary, secondary, or collegiate—offers opportunity of a type from which a minority only profits?
6. Is there any cure for the high rate of freshman "mortality"?
7. Is the democratic ideal in education being met when the sons and daughters of taxpayers are denied admission to state tax-supported institutions solely on the basis of their innate capacity being below average?
8. Is the situation a different one for highly specialized schools than for general schools?
9. What are the criteria which should decide or determine or guide in determining which students should be allowed to participate in post-secondary school offerings of our educational system?
10. How may the adequate transfer—and preparation of a select group,— from one part of a democratic educational system to a higher part be best brought about when the welfare of both parts of the entire system is taken into consideration?

The authors of this study, Dr. H. E. Schrammel and Dr. E. R. Wood, have attempted to throw light upon some of the aforementioned problems for one rather highly specialized institution, the Kansas State Teachers College of Emporia. The program which they have developed and which they present in this study is not an admittance to college program; rather it is a classification program for the purpose of determining to what extent, if at all, prognosis can be made of probable college success in the above-named institution.

EDWIN J. BROWN, *Editor.*

STUDIES IN EDUCATION

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EDITORIAL COMMITTEE:

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EDWIN J. BROWN, Director, Graduate Division.

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PREFACE.

This study was undertaken expressly for the purpose of providing a body of data by use of which the Kansas State Teachers College of Emporia, through its administrative officers and faculty members, might be able to render greater service to an increasing number of the young men and young women who annually enter its doors.

When this large group of aspiring young people annually gather upon the College campus in quest of what the College has to offer, the thoughtful College official and faculty member involuntarily ponders over questions somewhat as follows: Who are these freshmen? What is the nature of their preparation? What are the chances they will succeed academically according to their preparation? How long will they probably persist in attendance? What are the chances they will persist in attendance to graduation? Do they know for what they desire to fit themselves? Do they know what vocations are open to them, and do they realize for what vocations they are best fitted? How can this College best serve them? Is this College now serving its students in the best possible manner?

This study was undertaken in order to provide data by use of which these and other important questions might be answered with a fair degree of accuracy.

The battery of tests which is given the freshmen at the beginning of the term is given not to be able to classify, to label, or to determine anyone's intelligence level. The tests are not given for the purpose of depriving anyone of entering college or to determine whether or not anyone should be dismissed after having entered. They are given chiefly to learn something about the nature of the preparation of these students in order that the College may be able to serve them better in becoming academically successful.

When it was discovered that students who presented themselves for registration possessed widely varying degrees of preparation, the question naturally arose as to what influence such preparation must have on the academic success or failure of the students during the first semester of college as well as during the succeeding semesters. What effect does it have on the student's persistence in attendance? What effect does it have on his chances of meeting the academic requirements for the vocation for which he seeks to prepare himself?

It is the firm belief of the writers that a college has an obligation to its students beyond admitting them and instructing them in certain well-planned and required courses. It should assume responsibility of guiding them into avenues where they can be successful citizens, rendering service both to themselves and to others. If they are obviously incapable because of inferior preparation or other handicaps of meeting the academic requirements in preparation for the vocation they seek to enter, the college should strive to guide them educationally and vocationally toward such fields wherein success may be attained.

The duty of a college is not fully discharged toward the students, to the state, or to society, when annually it sends a large number from its doors as failures or misfits, because they failed to succeed in meeting specific academic requirements, which are essential for certification or graduation, without pointing them definitely toward avenues where they may be successful and to vocations for which they are suited physically and mentally and for which they can successfully master the preliminary requirements.

Parts of this study indicate quite clearly that some students cannot succeed in meeting the academic requirements set up by this College and that these students can be discovered in a measure before they enter college, and quite definitely, early in their college career. As soon as they can be discovered, such persons should obviously be directed toward other fields of endeavor from those for which the College is organized to train its students. Such a program of guidance should be constructive and intelligent rather than by the route of discouragement and failure.

If it has been possible to present a body of data which will prove helpful to the Kansas State Teachers College of Emporia and to other colleges which are interested in a more intelligent solution of the problems set forth, then this study has been worth the time and effort it has cost.

FOREWORD.

This study was initiated by Dr. E. R. Wood, and most of the research work presented herein was carried on under his guidance in the Bureau of Educational Measurements of the Kansas State Teachers College of Emporia during his directorship from 1924 to 1929. Part of the research work, however, was brought to completion, and this report was written, by Dr. H. E. Schrammel, the present director of the Bureau of Educational Measurements. The latter also assisted in the earlier study while he was assistant director of the Bureau of Educational Measurements.

The number of other persons who contributed toward the successful completion of this study is very large. Many of them were part-time employees in the Bureau of Educational Measurements while students of the College. Others developed parts of the study as research problems, a course offered by the Psychology Department of this College. Because their number is so large, it is impossible to give individual recognition to the work of any of these in the space available.

To Mr. Howard W. McIntosh, research assistant in the Bureau of Educational Measurements, however, special credit is due. Under his immediate direction and oversight for three years many of the detailed statistical studies included in this report and many more which must be withheld for want of space were successfully completed.

Much credit is also due President Thomas W. Butcher and the other administrative officers and faculty members of the College for the whole-hearted support given those in immediate charge of the work pertaining to the study. Without this coöperation and assistance the study could not have been carried to a successful completion. This study, then, belongs properly to the Kansas State Teachers College of Emporia rather than to the Bureau of Educational Measurements, under whose sponsorship it was carried on, or the directors thereof, under whose authorship it appears.

CHAPTER I.

INTRODUCTION.

This study deals with various aspects of student success and failure in college. Each person whose record is used in this study was a student at the Kansas State Teachers College of Emporia sometime during the period between 1923 and 1929.

In this study the following problems are given consideration:
1. Persistence in attendance of college students.
2. Persistence in attendance of college students in relation to rank on entrance tests.
3. Academic success in relation to rank on entrance tests.
4. Departmental differences in academic success in relation to rank on entrance tests.

In order that the data presented in the following chapters may be comprehended and properly interpreted the procedure followed from the time the freshman enters college is outlined in detail.

ADMINISTRATION OF ENTRANCE TESTS.

At the beginning of each semester the incoming freshmen at the Kansas State Teachers College of Emporia are required to take a battery of tests so that the relative degree of preparation of each student may be known. For example, for the class entering in the autumn of 1929 the battery consisted of the K. S. T. C. Entrance Test (intelligence), the Barrett-Ryan English Test, the Compass Survey Arithmetic Test, the Whipple Reading Test, a vocabulary test, and a true-false spelling test. In each of the other years which this study covers, a similar battery of tests was used.· In the early years of the program covered by this study a form of the Army Alpha Intelligence Scale and a form of the Terman Group Intelligence Test were used in place of the Entrance Test above named. For the achievement tests, various tests have been used in different years, but practically the same functions have always been covered.

This battery of tests was administered, scored, and the distribution of scores computed on the first day of the semester. On the following day, the students registered for their semester's work.

DETERMINATION OF PREPARATION GROUPS.

The students are classified into ten groups according to the following procedure. The raw scores made on each of the tests of the battery are weighted in such a manner that each test may contribute its equitable proportion toward the student's total score. For example, in 1929, the possible score on each test was as follows: Intelligence, 140; reading, 20; vocabulary, 100; arithmetic, 60; English, 150; and spelling, 100. The scores a student made were weighted as follows: the total scores of the intelligence and reading tests; one-half the total score of the vocabulary and arithmetic tests; and one-fourth the score of the English and spelling tests. The weighting is somewhat arbitrary. It

depends on the proportional length of the several tests and the relative importance of each according to the judgment of those in charge of administering this phase of the service.

The proportional amount that the median score of each test contributed toward the final score was:

Entrance test .... 43%   Arithmetic 10%
Reading .... 7%   English 15%
Vocabulary .... 11%   Spelling 14%

After the scores which each student made on the tests had been weighted, these derived scores were totaled. The distribution of these total scores was then divided into ten approximately equal groups. The students whose scores constituted the lowest 10 per cent composed group I; the next lowest 10 per cent, group II; the third lowest 10 per cent, group III; and so on up to the highest 10 per cent, who composed group X. In the following discussion the groups will be referred to as I, II, III, IV, V, VI, VII, VIII, IX, X. Group I will always refer to the lowest 10 per cent, and group X to the highest 10 per cent.

RANGE OF DISTRIBUTION OF SCORES ON ENTRANCE TESTS.

The range of the distribution of the scores on the several tests is illustrated by the distribution of the scores made on the entrance test by the 1929 class. Table I presents the distribution of scores made on the entrance test with respect to each group I, II, III, IV, etc. The group was determined by the total score.

It will be observed that the range of scores of group I on the entrance test was from 5 to 40; of group II, from 20 to 50; and so on to group X, which had a range from 90 to 125. Moreover, the median score of each group, from I to X, was higher than the median score of the preceding group. Each successive median, from group I to group X, except that of group VII, was higher than the third quartile of the preceding group; and each successive first quartile from group I to group X, except that of group VII, was higher than the median of the preceding group. For half of the groups, namely, II, III, VIII, IX and X, the first quartile was higher than the third quartile of the preceding group. The standard deviation ranged from 5.1 for group IX to 8.1 for group IV. The standard deviation for the whole group was 26.6.

The large degree of overlapping of scores between successive groups is readily discernible. No scores of the six lowest groups, however, equaled the lowest scores of groups IX and X, and no scores of groups I and II equaled the lowest scores of groups VII, VIII, IX and X.

MEDIAN SCORE OF EACH GROUP ON EACH TEST.

Table II gives the median score made by each group on each test. With a few exceptions, each successive higher group made a higher median score on each test than the group immediately preceding it. On the entrance test and on the English test there was not a single exception. On the vocabulary and the reading there was but one exception with each, and on the spelling

TABLE I.—Distribution of entrance test scores made by each of the ten groups of the 1929 freshmen.

Scores.	Groups.										Total.
	I	II	III	IV	V	VI	VII	VIII	IX	X	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
125-129										1	1
120-124										2	2
115-119										3	3
110-114										15	15
105-109										11	11
100-104							1		6	13	20
95-99								1	14	3	18
90-94								7	12	2	21
85-89							1	7	7		15
80-84							10	18	1		29
75-79					2	7	5	7			21
70-74					6	6	15	2			39
65-69			1	6	15	12	7	1			42
60-64			3	7	8	3	3				24
55-59			4	14	4						22
50-54		1	11	9	5	2					28
45-49		6	9	9							24
40-44	1	3	14	4							22
35-39	1	8	3	1							13
30-34	8	13	2	1							24
25-29	8	5									13
20-24	13	1									14
15-19	6										6
10-14	3										3
5-9	1										1
Total cases	41	37	47	51	40	40	42	43	40	50	431
Third quartile	29.8	41.3	53.3	61.3	69.3	74.1	80.1	88.0	98.6	112.8	79.7
Median	24.0	34.8	47.5	55.5	66.0	70.9	73.7	83.2	95.0	108.2	67.6
First quartile	20.0	31.3	42.4	49.0	60.6	67.1	70.2	80.2	90.8	102.9	47.5
Standard deviation	6.9	7.2	7.7	8.1	6.8	5.4	7.5	6.2	5.1	7.2	26.6

Read table thus (column 2): On the entrance test, the highest score of group I fell in the interval 40-44; the next highest score fell in the interval 35-39; eight scores fell in the interval 30-34; and so on. The total number of students in this group was 41; the third quartile score for the group was 29.8; the median, 24; the first quartile 20; and the standard deviation, 6.9. The column for each group is read in the same manner.

TABLE II.—Median score of each group of total distribution on each test.

Deciles.	Entrance.	English.	Vocabulary.	Spelling.	Reading.	Arithmetic
(1)	(2)	(3)	(4)	(5)	(6)	(7)
X........	108.2	114.8	64.8	92.2	14.6	41.2
IX........	95.0	108.8	52.6	90.6	12.3	32.0
VIII........	83.2	101.5	45.4	89.4	13.1	36.2
VII........	73.7	101.3	37.2	88.0	11.8	37.0
VI........	70.9	96.9	39.0	86.7	10.8	32.4
V........	66.0	93.7	32.0	86.5	9.8	30.0
IV........	55.5	93.1	29.4	82.5	8.8	31.0
III........	47.5	87.5	28.0	83.5	8.0	26.5
II........	34.8	81.7	24.8	84.2	8.1	22.6
I........	24.0	75.8	21.3	78.5	6.5	18.2
All........	67.6	96.0	35.6	87.2	10.3	30.9

Read table thus (column 2): The median score on the entrance test for group X was 108.2; for group IX it was 95.0; for group VIII it was 83.2; and so on. Read the column for each test the same way.

test but two. Only on the arithmetic test were there several exceptions. The median of group IX was lower than the medians of groups VI, VII and VIII; and the median of group V was exceeded by that of group IV. On the whole, however, there was a marked upward trend from group to group on each of the tests, and even in arithmetic the higher groups show a marked advantage over the lower ones.

While one might expect to find this condition, since all of the tests contributed toward determining the group distribution, yet it is notable that it was true to such a great extent. It indicates that, on the whole, the abilities functioning in correctly answering the items on the various tests are more or less closely related. No attempt is made to ascertain whether such ability is determined by previous preparation, native capacity, environment, or what not. The purpose is merely to measure the ability to perform the several functions called for, and, for want of a better name, this is referred to as "preparation."

CORRELATION BETWEEN TESTS.

In order to show the relationship of the students' achievement on the several tests, the intercorrelations have been computed. These are shown in Table III.

It will be observed that all the correlations were positive; and, as a rule, the highest correlations were obtained between the scores on individual tests and the group rank. This was in part due to the fact that the sources from each of the tests contributed toward determining the group rank. The highest single correlation, .95, was between the entrance-test scores and the group rank. The scores from this test contributed proportionally more toward determining the group rank than those of any other single test. It will be observed, however, that had only a single test been used for group determination,

TABLE III.—Intercorrelations between scores made by students on various tests.

(1)	Entrance test.	Reading test.	Vocabulary test.	English test.	Spelling test.	Arithmetic test.
	(2)	(3)	(4)	(5)	(6)	(7)
Decile rank.............	.95 ± .00	.72 ± .02	.77 ± .01	.70 ± .02	.48 ± .02	.62 ± .02
Entrance test...........	....	.66 ± .02	.69 ± .02	.63 ± .02	.41 ± .03	.58 ± .02
Reading test............	....	....	.57 ± .02	.51 ± .02	.33 ± .03	.42 ± .03
Vocabulary test.........	....	....	....	.54 ± .02	.44 ± .03	.36 ± .03
English test............	....	....	....	....	.44 ± .03	.46 ± .03
Spelling test...........	....	....	....	....	....	.38 ± .03

Read table thus: The correlation between group rank and entrance test scores was .95 ± .00; between group rank and reading test scores, .72 ± .02; and so on.

the entrance test would have furnished more nearly the same group rank obtained by the battery of tests than any other single test used.

The correlation between group rank and the spelling test score was .48. This was the lowest correlation secured between the scores of a single subject test and group rank. This correlation, although not high, still is twenty times its P. E. and, therefore, significant.

The second highest correlations, as a group, were those between the entrance test and the individual subject tests. These range between .41 for spelling and .69 for vocabulary, and the entrance test, respectively. The lowest of these was more than twelve times its P. E.

The intercorrelations between the scores on the several subject tests ranged from .33 between spelling and reading, to .57 between reading and vocabulary. The ratio of the coefficients to the respective P. E.'s was from eleven times as large to twenty-eight times as great.

The correlation between the total of the weighted scores from all the subject tests and the entrance-test scores was .81 ± .01. This shows that a high relationship exists between the student's ability to perform the regular school functions, such as spelling, reading and arithmetic, and such items of which the usual group intelligence test consists.

Between the sum of the weighted reading and vocabulary scores and the final group rank, a correlation of .83 ± .01 was obtained. This seems to indicate that a grouping almost as valid as the one obtained by the use of all the tests could be secured by using only these two tests for this purpose.

The purpose of this chapter, as stated at the beginning, was merely to outline the general procedure followed with the entering students, in order that the data, discussions, and interpretations which are to follow may be better understood.

CHAPTER II.

PERSISTENCE IN ATTENDANCE.

The holding power of a college is frequently expressed in terms of the ratio of senior college enrollment to total enrollment; of the number graduating to total enrollment, or of senior class enrollment to freshmen enrollment. Neither of these methods takes into consideration withdrawals which are offset by transfer of advanced students from other colleges or by return of former students who were in temporary absence during a period of years. A valid study in persistence, however, should trace the attendance of the individual students from entrance as freshmen during the following four consecutive years. In this study, an attempt has been made to do this.

SCOPE OF STUDY.

There are two main parts to this study. The first consists of a detailed study of the individual attendance of the freshmen who entered the Kansas State Teachers College of Emporia in 1923, during the following four years. These would by the logical sequence of attendance and promotion have been seniors in the autumn of 1926. The second part consists of a detailed study of the previous attendance of all the members of the four college classes enrolled in this college in the autumn of 1926.

PERSISTENCE IN ATTENDANCE OF THE 1923 FRESHMEN.

This part consists of a study of the persistence in attendance of the freshmen who entered college in 1923. The number of these who entered college that year, and the number and per cent of this group who attended during each of the three succeeding years, is shown in Table IV. This table gives the total number of the original group in each year's attendance, regardless of whether or not such attendance on the part of individual students was during consecutive years. It will be observed from column 2 that the original group numbered 436 women and 104 men, or a total of 540. In 1924, the second year, only 159 women and 52 men, or 37 per cent of the former and 50 per cent of the latter, resumed their work at this college. The third year, namely 1925, only 65 women and 32 men, a total of 97, of the original number were in attendance. This number included 20 who were not in attendance the preceding year but had returned after one year's absence. In 1926, the fourth year, only 54 of the original 540, exactly 10 per cent, were in attendance. This small number also included 20 who had not been in consecutive attendance, but had been absent from the college for one or two years after their entrance in 1923. Thus not all of these 54 were classified as seniors in 1926. Later in this study it will be pointed out that only 27 were actually seniors.

Table V presents in more detail the persistence in attendance of the individual members of this group of students. From column 2 of this table it will be seen that 59.2 per cent of the women and 44.3 per cent of the men, or 56.3 per cent of all, attended this college for one year only.

That the process of elimination did not cease with the exodus following the first year of this group in college is shown by the data in columns 3, 4 and 5 of Table V. It will be seen that an additional 22.8 per cent of the original

TABLE IV.—Attendance of the 1923 freshmen from 1923 to 1926.

	Number attending each year.				Per cent of original group in attendance each year.			
	1923.	1924.	1925.	1926.	1923.	1924.	1925.	1926.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Women......................	436	159	65	37	100	37	15	8
Men.........................	104	52	32	17	100	50	31	16
Totals....................	540	211	97	54	100	39	18	10

Read table thus: Of the original group of 436 women who entered college as freshmen in 1923, 159 returned in 1924; 65 in 1925; and 37 in 1926. Counting the original group as 100 per cent, 37 per cent returned the second year, 15 per cent the third year, and 8 per cent the fourth year. Read each row similarly.

group remained only one more year, or a total of two successive years; and a further 8 per cent remained only three successive years. This left the astonishingly small number of 20 women and 14 men, 6.3 per cent of the original 540, who persisted in attendance during three successive years and were enrolled for the fourth consecutive year.

Reference should here be made, also, to the number of students with scattering attendance. Of those who temporarily withdrew for a year or more there had returned by 1926, 21 for one additional year, and 15 for two additional years. Hence the return of the withdrawals of former years does not, apparently, compose a large proportion of the student body of this college. This phase of the problem, as well as that involving the consistency of successive attendance, shall be given further consideration in connection with the data to be presented later in this study.

TABLE V.—Persistence in attendance of the 1923 freshmen.

	Years of consecutive attendance.				Years of scattering attendance after 1923.				
	1923 only.	1923 and 1924.	1923, 1924 and 1925.	1923, 1924, 1925 and 1926.	1925.	1926.	1924 and 1926.	1925 and 1926.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Women...............	258	98	31	20	12	5	10	2	436
Men................	46	25	12	14	4	....	1	2	104
Totals...........	304	123	43	34	16	5	11	4	540

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Women...............	59.2	22.5	7.1	4.6	2.7	1.1	2.3	.5	100
Men................	44.3	24.0	11.5	13.5	3.8	....	1.0	1.9	100
Totals...........	56.3	22.8	8.0	6.3	3.0	.9	2.0	.7	100

Read table thus: Of the 436 freshmen women who entered college in 1923, 258 attended that year only; 98 attended only during 1923 and 1924; 31 attended only during the three years 1923, 1924 and 1925; 20 attended the four consecutive years, 1923 to 1926; 12 attended in 1923 and in 1925; 5 attended in 1923 and in 1926; 10 attended in 1923, 1924 and 1926; and 2 attended in 1923, 1925 and 1926.

PROPORTIONAL TURNOVER OF DIFFERENT COLLEGE YEARS.

Another important question in this connection is in regard to the proportional amount of withdrawal following different college years. In other words, what per cent of this freshman class remained in college for the sophomore year? What per cent of these remained for the junior year? And what per cent of these for the senior year?

The data in regard to this are shown in Table VI. In columns 2 to 5 of this table are found the number of the original group of the 1923 freshmen who were in consecutive attendance during each of the following years, including 1926. In columns 6 to 8 are found the per cent that each year's attendance was of the preceding year's attendance. Thus in 1924, 37 per cent of the women who were in attendance in 1923 were in college. In 1925, 32 per cent of those attending both of the preceding years were in attendance; and in 1926, 39 per cent of those attending the three preceding years were in attendance. Hence, in the case of the women students, the loss after the third year was only slightly smaller proportionally than it was after the first year, but after the second year it was greater than it was after either of these other periods.

With the men students the proportional turnover was not so great as with the women in a single one of the three periods. It will be observed that 50 per cent remained after each of the first two periods and 54 per cent after the third year.

TABLE VI.—The number and per cent of 1923 freshmen in each succeeding year of consecutive attendance.

	Number attending each year.				Per cent that each year's attendance was of previous year's attendance.		
	1923.	1924.	1925.	1926.	1924.	1925.	1926.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Women..............	436	159	51	20	37	32	39
Men.................	104	52	26	14	50	50	54
Totals.............	540	211	77	34	39	37	44

Read table thus: Of the original group of 436 women who entered college as freshmen in 1923, 159 attended also in 1924. Of these 159, 51 attended also in 1925. Of these 51, 20 attended also in 1926. Of those who attended college in 1923, 37 per cent attended in 1924; of those who attended in 1924, 32 per cent attended in 1925; and of those who attended in 1925, 39 per cent attended in 1926.

PROBABLE CAUSES FOR LACK OF PERSISTENCE.

The probable causes for the large proportional withdrawal after each college year merit some speculation. The loss after the first year is undoubtedly due mostly to improper initial adjustment, lack of interest, lack of ability to do college work successfully, and the granting of the three-year state certificate to teach, which may be earned by successfully completing one year of college work. The loss after the second year is obviously due mostly to the granting of the life certificate to students successfully completing two years of college work. The fact that the proportional loss at the end of the third year is

equally great, however, is an enigma. It may be that students who seek a life certificate find it necessary to remain in college three years instead of two because of subject failures, carrying less than full programs, or because of inability to secure a position after earning the life certificate. To what extent any of these causes are operative is not known. Moreover, no other valid reasons are apparent which would explain the proportionally great withdrawal at the end of the junior year of college.

PREVIOUS TEACHERS COLLEGE ATTENDANCE OF ALL 1926 STUDENTS.

This part of the study deals with the previous attendance at this college of all students enrolled in the autumn of 1926. The time period covered prior to 1926 reaches back three years; that is, to the autumn of 1923. Those students who in 1926 were seniors, if they were in consecutive attendance and made normal progress, were freshmen in 1923. Under the same conditions the juniors were not freshmen until 1924, and the sophomores until 1925. Hence a thorough study of persistence in attendance of this group was possible in the period actually covered by this part of the project.

Table VII lists in detail the attendance record, as far back as 1923, of all students enrolled at this college in the autumn of 1926. This record is listed separately for each class by sexes. Table VIII shows the per cents of the same data. These data will be briefly considered separately for each college class.

The freshmen. It will be observed that 667 of the 730 freshmen, or 91.3 per cent, were in attendance at this college for the first time in 1926. Fifty-four, or 7.3 per cent, had also been in attendance the previous year. Only a scattering few had been in attendance prior to 1925.

TABLE VII.—The number of the 1926 students who were in attendance certain periods of years, 1923 to 1926.

(1)	(2)	1926 only.	1925 and 1926.	1924, 1925 and 1926.	1923, 1924, 1925 and 1926.	1924 and 1926.	1923 and 1926.	1923, 1925 and 1926.	1923, 1924 and 1926.	Total in 1926.
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Fresh-men	Women....	484	29	....	....	2	....	1	1	517
	Men.......	183	25	2	....	3	....	....	....	213
	Totals....	667	54	2	....	5	....	1	1	730
Sopho-mores.	Women....	91	151	7	....	17	3	....	2	271
	Men.......	16	58	31	....	8	....	....	1	114
	Totals....	107	209	38	....	25	3	....	3	385
Juniors.	Women....	49	20	35	4	6	....	....	3	117
	Men.......	11	12	26	6	6	....	1	....	62
	Totals....	60	32	61	10	12	....	1	3	179
Seniors.	Women....	23	29	25	19	2	....	4	2	104
	Men.......	8	7	7	8	....	....	1	....	31
	Totals....	31	36	32	27	2	....	5	2	135

Read table thus: Of the 517 freshmen women enrolled in 1926, 484 were in attendance for the first time; 29 had also attended in 1925; 2 had also attended in 1924; 1 in 1923 and 1925; and 1 in 1923 and in 1924.

There are several valid reasons why there should be some students listed as freshmen who had already attended this college during the previous year. Among these may be listed failures in one or more subjects, carrying less than a full program because of part-time employment or low rating on entrance tests, withdrawal for part of the previous year, and late entrance in first year. These are valid reasons, also, for members of succeeding classes having been in attendance longer than the standard required time to reach the classification accorded them. Hence the attendance record of this freshman class presents no unusual condition.

The sophomores. In considering the attendance record of the sophomore class of 1926, it should first of all be noted that it contained scarcely more than half as many students as the freshman class. This class started in 1925 with 804 members. A year later it was only 48 per cent as large. In addition

TABLE VIII.—The per cent of the 1926 students who were in attendance certain periods of years, 1923 to 1926.

(1)	(2)	1926 only.	1925 and 1926.	1924, 1925 and 1926.	1923, 1924, 1925 and 1926.	1924 and 1926.	1923 and 1926.	1923, 1925 and 1926.	1923, 1924 and 1926.	Total in 1926.
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Fresh-men.	Women....	93.6	5.6	....	....	.4	....	.2	.2	100
	Men.......	86.0	11.7	.9	....	1.4	....	....	....	100
	Totals....	91.3	7.3	.3	....	.7	....	.2	.2	100
Sopho-mores.	Women....	33.6	55.7	2.6	....	6.3	1.1	....	.7	100
	Men.......	14.0	50.9	27.2	....	7.0	....	....	.9	100
	Totals....	27.8	54.2	9.9	....	6.5	.8	....	.8	100
Juniors.	Women....	41.9	17.1	29.9	3.4	5.1	....	....	2.6	100
	Men.......	17.7	19.4	41.9	9.7	9.7	....	1.6	....	100
	Totals....	33.4	17.9	34.1	5.6	6.7	....	.6	1.7	100
Seniors.	Women....	22.1	27.9	24.1	18.3	1.9	....	3.8	1.9	100
	Men.......	25.8	22.6	22.6	25.8	....	....	3.2	....	100
	Totals....	23.0	26.6	23.7	20.0	1.5	....	3.7	1.5	100

Read table: Of the freshmen women enrolled in 1926, 93.6 per cent were in attendance for the first time; 5.6 per cent had also attended in 1924; and so on.

to this loss in gross membership, it is necessary to look farther for the real loss this class had suffered. By reference to column 3 of Table VII, it will be observed that 107, or 27.8 per cent, of the 1926 membership of this class consisted of new students who had transferred to this institution with advanced standing from other colleges. Only 209, or 54.2 per cent, of this class were sophomores who had made their first appearance on the campus of this college as freshmen a year earlier. An additional 38, however, had also been numbered among the group in 1925 but as holdovers from a previous year.

In addition to those in consecutive attendance just considered, 25, or a trifle more than 6 per cent, had been in attendance in 1924 and returned as sophomores after one year's absence, and a negligible number had attendance records dating back as far as 1923. It is apparent that a very small number

of students return to this college after an interval of more than one year of absence. This may be verified by observing, also, the attendance record of the junior and senior classes.

The juniors. In considering the previous attendance record of the junior class, it will be noted that the facts are not greatly dissimilar to those pointed out in connection with the sophomore group. First, the total number is again nearly one-half that of the preceding class, this time slightly smaller than half. One-third had entered this college for the first time, having done their previous two years of work at one or more other colleges. Nearly 18 per cent had been in this school only one previous year, namely, 1925; only 34 per cent had been in attendance for two consecutive years. Regarding those who had previously attended this college, who had returned this year after an interval of absence, the facts are simple. Twelve returned after one year's absence. None that returned had had an absence record of two years, but a negligible few, four in all, had had a previous scattering attendance record with an absence interval of more than two years.

The seniors. The attendance of the members of the senior class at this college was no more consistent than was that of the members of the two preceding classes. The gross membership of this class had not diminished in the same proportion as did the two preceding classes, each compared to the one immediately preceding it. In this case the gross membership was 75 per cent of the junior membership, while the latter was less than 50 per cent of the sophomore membership, and this one only slightly more than 50 per cent of the freshman membership. It will be observed, however, that 23 per cent of the senior class were this year for the first time students at this college; nearly 27 per cent had been in attendance only one year immediately preceding the senior year; nearly 24 per cent had only two consecutive years of previous attendance; and only 20 per cent had three consecutive years of previous attendance. This means that of these 135 seniors only 27 had begun their college career at this college as freshmen in 1923, and advanced at the normal rate. In the first part of this study it was shown that 540 students entered this college as freshmen in 1923; and of these, 27, or 5 per cent, entered as seniors three years later.

Here again it should be observed that only a very small number whose attendance was scattering because of intervening years of absence, were found as members of this class. The few that did thus return did so after one year's absence, but not after two years of absence.

SUMMARY AND CONCLUSIONS.

1. The degree of persistence in attendance of students at this college is marked by its smallness. This is true of students entering without previous college experience as well as of those entering with various quantities of advanced standing.

2. Lack of persistence is equally marked throughout the college course. Approximately the same proportion of those still remaining withdraw after each college year.

3. The college has a marked power to attract students who have advanced standing from other colleges. In the autumn of 1926, of a total enrollment of 1,429, the new students totaled 928, or nearly 65 per cent. These were dis-

tributed by classes as follows: **667** freshmen, **170** sophomores, **60** juniors, and **31** seniors. The students with advanced standing composed **28** per cent of the sophomores, **33** per cent of the juniors, and **23** per cent of the seniors.

4. The holding power of the college is small. Holding power and persistence are the same, except the former is looked at from the point of view of the college; the latter from the point of view of the student. Only one-fifth of the 1926 senior-class membership consisted of students who were numbered among the freshman class three years earlier, and these constituted only one-twentieth of that freshman class.

5. Former students who have been absent one year occasionally return to resume their work, but those absent longer than one year return infrequently for that purpose.

6. In regard to sex differences in persistence, it may be said that men show this trait somewhat more than women. This may be due to the fact that men who expect to enter the teaching profession prepare for positions for which larger training and even degrees are required. Moreover, it is also probable that men look for greater permanency in the profession in contrast to women who hope that after several years in the profession they may drop from it by way of the marriage route. To what extent athletics may be a contributing factor in causing men to show greater persistence may only be conjectured. At any rate, athletic participation places a premium on continued attendance.

CHAPTER III.

PERSISTENCE IN ATTENDANCE OF STUDENTS IN RELATION TO THEIR RANK ON ENTRANCE TESTS.

In Chapter II an analysis of persistence in attendance of college students was presented in detail. In that study persistence was considered without reference to the students' preparation, or rank on the college entrance tests. In this chapter a report is made of student persistence and elimination in relation to preparation as measured by rank on a battery of entrance tests. The details of administering this battery of tests and determining the group ranks of the students were fully explained in Chapter I.

This study deals with the attendance of all the members of the two freshman classes which entered the Kansas State Teachers College of Emporia in the autumn of each of the years 1924 and 1925. The total number of students available for this study consisted of 301 men and 686 women, a total of 987.

Table IX gives the number and per cent of men and women which composed each group. It will be seen that some of the groups consisted of more students than others, whereas theoretically all should consist of the same number. There are two reasons for this. Frequently the same score was made by a large number of students. When this was the case at a point in the distribution where a group division was to be made, all scores of the same size had to be counted in one or the other of the two adjacent groups. Hence the scores were divided so that the ten groups, though not exactly equal in

TABLE IX.—The number and per cent of students of each sex composing each group.

Group.	Men.		Women.		Total number.
	Number.	Per cent.	Number.	Per cent.	
(1)	(2)	(3)	(4)	(5)	(6)
I	30	33	62	67	92
II	32	34	63	66	95
III	37	36	67	64	104
IV	28	25	86	75	114
V	36	35	67	65	103
VI	38	38	62	62	100
VII	25	24	80	76	105
VIII	22	25	67	75	89
IX	27	30	63	70	90
X	26	27	69	73	95
Totals	301	30.5	686	69.5	987

Read table thus: The 92 students of group I consisted of 30 men, or 33 per cent, and 62 women, or 67 per cent.

size, were as nearly equal as possible. The second factor which tended to make the groups unequal in size was that the scores of students who took the tests after the group determination had been made frequently tended to fall in certain of the groups.

SEX DIFFERENCES IN GROUP DISTRIBUTION.

Of the students considered in this study, the men composed 30.5 per cent and the women 69.5 per cent. It will be observed that a slightly larger per cent of the scores of the men ranked in the lower groups than in the higher groups. That is, the preparation of the men, as measured by the entrance tests, was, on the average, slightly inferior to that of the women students. Only 25 per cent of the men ranked in the three highest groups, while 33 per cent ranked in the three lowest groups. The opposite, of course, was true in respect to the scores of the women. Of all the women, 29 per cent ranked in the three highest groups and 28 per cent in the three lowest groups. These differences, however, are not highly significant. It is undoubtedly more significant that the group distribution of the two sexes are as much alike as they are.

PERSISTENCE AND ELIMINATION ACCORDING TO GROUP RANK.

In this study the attendance record of these 987 students was carefully traced from the time of their entry into college as freshman to June, 1929. It was thus possible to trace the record of the students of the first of these classes during a period of ten regular semesters and four summer terms. Since a summer term equals one-half of a regular semester, the members of this class had the equivalent of twelve semesters in which to complete the work of the regular eight semesters required for graduation. Those entering in 1925 had eight semesters and three summer terms, or an equivalent of nine and one-half semesters. In this study the data for the two classes are combined.

Table X gives the number of semesters which students from both of these two classes completed at this college during the period covered by this study.

It should be noted that if a student attended, for example, two semesters and one summer term, or actually two and one-half semesters, he was credited in this table and the following five tables, with having attended three semesters. One having attended two semesters and two summer terms was also credited with having attended three semesters. One, however, who attended two semesters and three or four summer terms was credited with four semesters' attendance. In the original study, careful record was kept of each student's attendance in half semesters, but these tables were condensed to this form for the convenience of this report.

The last horizontal row of figures of Table X gives the total number from these two classes who attended this college each number of semesters. Thus 122 attended one semester only, 207 attended two semesters only, 143 attended three semesters only, and so on; and 77 of the total number had graduated by June, 1929.

It should be noted that the semester attendance credited in this table may have been during consecutive or nonconsecutive semesters. The figures give merely the students' total attendance.

TABLE X.—The number of students from each group who attended college each number of semesters.

Group rank.	Number attending each number of semesters from each group.								No. grad-uated.	Total No.
	1	2	3	4	5	6	7	8		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I.........	22	22	15	15	6	8	2	2	....	92
II.........	19	24	8	17	19	4	2	....	2	95
III.........	17	21	21	19	9	4	3	3	7	104
IV.........	18	22	21	20	17	4	4	1	7	114
V.........	13	22	21	15	13	5	3	4	7	103
VI.........	10	31	15	15	16	4	3	....	6	100
VII.........	8	18	13	21	18	10	5	4	8	105
VIII.........	4	15	11	20	17	6	2	5	9	89
IX.........	7	13	10	21	15	7	2	4	11	90
X.........	4	19	8	19	12	4	6	3	20	95
Totals....	122	207	143	182	142	56	32	26	77	987

Read table thus: Of the 92 students of group I (the lowest 10 per cent on the entrance tests), 22 attended but one semester; 22 others attended two semesters only; 15 attended three semesters only; and so on. Only two attended eight semesters, and not a single one graduated. The row for group II, which consisted of 95 students, is read in like manner. From this group two students graduated. Each of the following rows for each group is read similarly.

One other item to be observed in this connection is that the number of semesters which students who graduated attended is not shown in this table. Thus two students of the first group had attended eight semesters, but none had graduated. From group III three had attended eight semesters without having graduated, but seven, for whom the length of attendance is not shown, had graduated.

Table XI gives the per cents of the data shown in Table X. By referring to column 2 of Table XI, which gives the per cent of students who attended this college for one semester only, it will be observed that very marked differences exist. Twenty-four per cent from group I and 20 per cent from group II attended but one semester. On the other hand, only 4 per cent from group X attended this brief period. The average for those attending only one semester of all groups combined was 12 per cent. The average for the five lowest groups (I-V) was nearly 18 per cent, and for the five highest groups (VI-X) it was 7 per cent.

These data seem to indicate that lack of adequate preparation was a large factor during the students' initial college experience which caused many to withdraw during, and at the close of, the first semester. Undoubtedly many became discouraged because of inferior success in their courses and therefore failed to persist longer in attendance. Moreover, the administration of the college maintains a rule that students failing in six or more hours in any semester are not allowed, except by special permission of the president, to enroll for the succeeding semester. While data are not available to show

what percentage of these one-semester students were thus eliminated, it is apparent that a large number of them did not return for further work after having been barred in this manner.

TABLE XI.—The per cent of students from each group who attended college each number of semesters.

Group rank.	Per cent attending each number of semesters from each group.								Per cent grad- uated.
	1	2	3	4	5	6	7	8	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.................	24	24	16	16	7	9	2	2	....
II.................	20	25	9	18	20	4	2	....	2
III.................	16	20	20	18	9	4	3	3	7
IV.................	16	19	18	18	15	4	3	1	6
V.................	13	21	20	14	13	5	3	4	7
VI.................	10	31	15	15	16	4	3	....	6
VII.................	8	17	12	20	17	9	5	4	8
VIII.................	5	17	12	22	19	7	2	6	10
IX.................	8	15	11	23	17	8	2	4	12
X.................	4	20	9	20	13	4	6	3	21
Totals...........	12	21	15	18	14	6	3	3	8

Read table thus: 24 per cent of the students of group I attended but one semester; 24 per cent others attended two semesters only; 16 per cent attended three semesters only; and so on.

For those remaining in college only two semesters there was no marked difference between the average per cent of the five lowest groups and that of the five highest groups. For the lowest five groups the average per cent persisting in attendance only two semesters was 22 per cent; for the five highest groups this average was 20 per cent.

For those persisting in attendance only three semesters, the average of the five lowest groups was 16 per cent; for the highest five groups it was 12 per cent.

For those persisting in attendance more than three semesters, the average per cent for each number of semesters' attendance was in every case lower for the five lowest groups than for the five highest groups. This, of course, was largely due to the fact that fewer of the lower groups remained in attendance for this number of semesters. Only 42 per cent of those constituting the five lowest groups remained to persist in attendance after their first three semesters, while 62 per cent of the highest five groups remained.

CORRELATION BETWEEN GROUP RANK AND PERSISTENCE IN ATTENDANCE.

The correlations between the students' group rank and the number of semesters each persisted in attendance was computed and the following co- efficients were obtained:

Men, r equals.. $.29 \pm .01$
Women, r equals..................................... $.23 \pm .01$
Both sexes combined, r equals....................... $.25 \pm .01$

None of these coefficients is high enough to be very significant. Since in each case, however, the probable error is also very small, they do have some significance. It is not possible, however, to attach much weight to the group rank alone in predicting the degree of persistence in attendance a student of a given rank of preparation may show.

SEX DIFFERENCES IN PERSISTENCE IN ATTENDANCE.

Table XII shows the number of men who persisted in attendance each number of semesters, and Table XIII shows the same data in terms of per cents. Tables XIV and XV, respectively, show the same data for the women.

These tables are interpreted in the same way as Tables X and XI, which presented these data for both men and women combined. In general, the persistence of the students of each sex is very much like that of the whole group, which was explained somewhat in detail above. Some interesting differences, however, were discovered which merit attention.

While 9 per cent of the women attended college but one semester, 20 per cent of the men persisted in attendance only one semester. The differences in persistence in attendance between the highest five groups (VI-X) and the lowest five groups (I-V) are also pronounced. The average per cent of the

TABLE XII.—The number of men from each group who attended college each number of semesters.

Group rank.	Number attending each number of semesters from each group.									
	1	2	3	4	5	6	7	8	No. grad-uated.	Total No.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I.........	10	4	5	7	....	2	2	....	....	30
II.........	13	6	2	4	5	1	....	....	1	32
III.........	7	10	5	7	2	....	....	1	5	37
IV.........	7	6	4	4	1	....	3	....	3	28
V.........	5	5	8	5	1	2	1	4	5	36
VI.........	7	10	3	8	5	1	1	....	3	38
VII.........	6	5	2	....	2	5	1	1	3	25
VIII.........	2	3	2	3	4	2	....	2	4	22
IX.........	3	3	4	3	4	5	....	1	4	27
X.........	....	6	1	3	3	3	1	1	8	26
Totals....	60	58	36	44	27	21	9	10	36	301

Read table thus: Of the 30 men of group I, 10 attended but one semester; 4 others attended two semesters; 5 others attended three semesters; and so on.

TABLE XIII.—The per cent of men from each group who attended college each number of semesters.

Group rank.	Per cent attending each number of semesters from each group.								Per cent graduated.
	1	2	3	4	5	6	7	8	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I	33	13	17	23	....	7	7	....	....
II	41	19	6	13	16	3	....	....	3
III	19	27	14	19	5	....	....	3	13
IV	25	21	14	14	4	....	11	....	11
V	14	14	22	14	3	6	3	11	14
VI	18	26	8	21	13	3	3	....	8
VII	24	20	8	....	8	20	4	4	12
VIII	9	14	9	14	18	9	....	9	18
IX	11	11	15	11	15	18	....	4	15
X	....	23	4	11	11	12	4	4	31
Totals	20	19	12	15	9	7	3	3	12

Read table thus: 33 per cent of the students of group I attended but one semester; 13 per cent attended two semesters only; 17 per cent attended three semesters only; and so on.

TABLE XIV.—The number of women from each group who attended college each number of semesters.

Group rank.	Number attending each number of semesters from each group.								No. graduated.	Total No.
	1	2	3	4	5	6	7	8		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I	12	18	10	8	6	6	....	2	....	62
II	6	18	6	13	14	3	2	....	1	63
III	10	11	16	12	7	4	3	2	2	67
IV	11	16	17	16	16	4	1	1	4	86
V	8	17	13	10	12	3	2	....	2	67
VI	3	21	12	7	11	3	2	....	3	62
VII	2	13	11	21	16	5	4	3	5	80
VIII	2	12	9	17	13	4	2	3	5	67
IX	4	10	6	18	11	2	2	3	7	63
X	4	13	7	16	9	1	5	2	12	69
Totals	62	149	107	138	115	35	23	16	41	686

Read table thus: Of the 62 women of group I, 12 attended but one semester; 18 others attended two semesters; 10 others attended three semesters; and so on.

TABLE XV.—The per cent of women from each group who attended college each number of semesters.

Group rank.	Per cent attending each number of semesters from each group.								
	1	2	3	4	5	6	7	8	Per cent graduated.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.................	19	29	16	13	10	10	....	3	....
II.................	9	29	9	21	22	5	3	....	2
III.................	15	16	24	18	10	·6	5	3	3
IV.................	13	18	20	19	18	5	1	1	5
V.................	12	25	19	15	18	5	3	....	3
VI.................	5	34	19	11	18	5	3	....	5
VII.................	3	16	13	26	20	6	5	4	6
VIII.................	3	18	13	25	19	6	3·	5	8
IX.................	6	16	10	29	17	3	3	5	11
X.................	6	19	10	23	13	2	7	3	17
Totals............	9	22	16	20	17	5	3	2	6

Read table thus: 19 per cent of the students of group I attended but one semester; 29 per cent others attended two semesters only; 16 per cent attended three semesters only; and so on.

men of the lowest five groups who attended but one semester was 26.4 per cent; for the highest five groups it was 12.4 per cent. For the lowest five groups of the women this average was 13.6 per cent; and for the highest five groups it was only 4.6 per cent. Thus, proportionally, the ratio of elimination of the men of the highest five groups was almost the same as that of the women of the five lowest groups, and nearly three times as great as that of the women of equal group rank. Again, the ratio of elimination of the men of the five lowest groups was nearly twice that of the women of equal group rank, and nearly six times as great as that of the women of the five highest groups.

For those who persisted in attendance longer than one semester, however, the two sexes showed few marked differences in the degree in which they were eliminated after each additional semester's attendance. Following the elimination with the first semester's attendance, proportionally fewer men than women terminated their attendance after each succeeding semester. Each of the second, third, fourth and fifth semesters witnessed a comparatively large per cent of elimination among women students. Among these there was little difference respecting their group rankings. That proportionally more women terminated their college attendance following each of these semesters was perhaps largely caused by their seeking only state or life certificates, which are secured by one and two years of successful work, respectively. Since they did not seek degrees, they undoubtedly terminated their attendance when they received these certificates. The per cent of the original group which graduated was twice as large for the men as for the women. This will be referred to again later.

MEDIAN NUMBER OF SEMESTERS COMPLETED BY STUDENTS OF EACH GROUP.

To show more concretely the differences in persistence in attendance by the students of the several groups, the median number of semesters completed by each group was computed. These data are shown in Table XVI. From this table it is further seen that, in general, students of the higher groups remained in college longer than those of the lower groups. There was, however, little difference from any one group to the next higher one. Moreover, higher medians were found for some of the lower groups than for some of the higher groups. For example, the men of groups I and III had a higher median than those of group IV, and those of group V had a higher median than those of groups VI and VII.

For the women similar discrepancies occurred. For example, the median of group II was higher than the medians of the succeeding four groups, while the medians for groups III and IV were each higher than those of groups V and VI. Again it will be noted that the medians for the four groups VII to X, inclusive, were the same.

Among medians from both sexes combined, fewer discrepancies were found. For groups II to VI, inclusive, the median number of semesters' attendance was practically the same. Moreover, the medians for groups VII to X, inclusive, were also practically the same. It is notable, however, that the medians of the four highest groups, while nearly equal, all exceeded by one semester the median of the lower groups which also were nearly equal.

One reason why the median number of semesters' attendance of some of the lower groups was higher than the medians of higher groups undoubtedly was that students with inferior preparation, who eventually obtained a cer-

TABLE XVI.—Median number of semesters attended by each sex from each group.

Group.	Men.	Women.	Both sexes.
(1)	(2)	(3)	(4)
I	3.1	2.6	2.7
II	2.3	3.8	3.2
III	3.2	3.3	3.3
IV	3.0	3.4	3.3
V	3.8	3.1	3.3
VI	3.3	3.1	3.2
VII	3.3	4.3	4.3
VIII	4.8	4.3	4.4
IX	4.8	4.3	4.3
X	5.3	4.3	4.4
Average of medians	3.7	3.7	3.7

Read table thus: The median number of semesters that students of group I attended was: men, 3.1; women, 2.6; both sexes, 2.7.

tificate or a degree, required longer to accumulate the prescribed number of credits than those of more superior preparation of the higher groups. Since, however, the medians of the higher groups, in general, tended to be higher than those of the lower groups, it seems justifiable to conclude that those with superior preparation persisted in attendance to a greater extent in order to obtain a higher certificate or a degree.

The average of the medians for the ten groups of the men and of the women was equal. It is notable that this should be the case since a larger percentage of the former persisted in attendance to graduation. Apparently the advantage in this respect accruing to the men at the upper limit in attendance was offset by the equally larger proportion who terminated their attendance earlier; for example, at the first semester period.

PER CENT OF ORIGINAL DISTRIBUTION PERSISTING IN ATTENDANCE EACH NUMBER OF SEMESTERS.

Another way of considering the problem of persistence and elimination is in terms of the per cent of the original distribution who were in attendance each number of semesters. Table XVII shows the per cent of the original 301 men and 686 women who attended college each number of semesters.

From the data presented in Table XVII a comparative study of the elimination of the two sexes is possible. For example, only 80 per cent of the men remained in attendance after the first semester, while 91 per cent of

TABLE XVII.—Per cent of whole distribution attending during each number of semesters.

Number semesters' attendance.	Per cent men.	Per cent women.	Per cent of all.
(1)	(2)	(3)	(4)
1	100	100	100
1½	80	91	88
2	80	90	87
2½	61	69	67
3	59	62	61
3½	49	54	52
4	48	51	50
4½	34	34	34
5	31	23	25
5½	25	17	19
6	24	15	18
6½	18	12	14
7	17	10	12
7½	15	8	10
8	14	7	9
Graduated	12.0	6.0	7.8

Read table thus: 100 per cent of each sex and of the whole distribution were in attendance one or more semesters; 80 per cent of the men, 91 per cent of the women, and 88 per cent of all, were in attendance one and one-half or more semesters; 80 per cent of the men, 90 per cent of the women, and 87 per cent of all men were in attendance two or more semesters.

the women remained. It will be seen that of each pair of per cents that for the women exceeds that of the men down to four and one-half semesters' attendance, where both sexes retained 34 per cent in attendance. With the fifth semester's attendance the men retained a larger per cent than the women and maintained a substantial advantage to graduation, where their per cent was exactly twice as large as that of the women.

Only 14 per cent of the men, 7 per cent of the women, and 9 per cent of all, however, attended as much as eight semesters; and only 12 per cent of the men, 6 per cent of the women, and 7.8 per cent of all graduated.

PER CENT GRADUATING FROM EACH GROUP.

The per cent graduating from each group has been shown above in Tables XI, XIII and XV. In order to focus attention upon these data, they are shown again in Table XVIII. By "graduating" is meant that the students received a degree and not merely a certificate to teach.

It will be seen that there are marked differences between the sexes in this respect. Twelve per cent of the original group of men graduated, but only 6 per cent of the women persisted in attendance to attain this distinction.

As has been suggested above, women undoubtedly prepare themselves in greater proportion for positions as teachers of primary and intermediate grades where little, if any, stress is placed on their having degrees. Men, on the

TABLE XVIII.—The per cent of students from each group graduating.

Group rank.	Per cent men.	Per cent women.	Per cent of all.
(1)	(2)	(3)	(4)
I..	....	....	....
II...	3.1	1.6	2.1
III..	13.5	3.0	6.7
IV..	10.7	4.7	6.1
V...	13.9	3.0	6.8
VI..	7.9	4.8	6.0
VII...	12.0	6.3	7.6
VIII..	18.2	7.5	10.1
IX..	14.8	11.1	12.2
X...	30.8	17.4	20.8
All...	12.0	6.0	7.8

Read table thus: No students from group I graduated. The per cent graduating from group II was: Men 3.1 per cent; women, 1.6 per cent; both sexes combined, 2.1 per cent.

other hand, prepare in larger proportions for junior and senior high school and administrative positions where degrees are more essential, if not imperative. Moreover, men in greater proportion tend to prepare themselves for a life's vocation, while a large per cent of the women use the teaching profession only as a temporary vocation before marriage.

Respecting the groups to which those who were graduated belonged, it will be observed that aside from the two lowest groups and the three highest

groups, there was little difference. Not a single student from the lowest group was graduated and but two (2 per cent) from group II. On the other hand, 31 per cent of the men and 17 per cent of the women of group X received the coveted degree. There were also proportionally more graduates from groups VIII and IX than from the groups lower than these. Undoubtedly the outstanding point respecting the number of this graduating class was that only 77 of the original distribution of 987 students, or 7.8 per cent completed the work.

CORRELATION BETWEEN GROUP RANK AND PER CENT GRADUATING.

It was pointed out above that there was a very small correlation between group rank on entrance tests and persistence in attendance. Between group rank and the per cent graduating from each group, however, very high correlations were found. By use of the rank-difference method, the only feasible method under the conditions, the following coefficients were obtained:

Men, r equals.. .83 ± .07
Women, r equals...................................... .98 ± .01
Both sexes combined, r equals........................ .91 ± .04

SUMMARY.

1. Low correlation coefficients were obtained between the number of semesters students attended college and their group ranks on the entrance tests. The correlation for men was slightly higher than the correlation for the women or for the whole group; but none was sufficiently high to warrant its use as a valid prognostic measure for predicting persistence in attendance.

2. High correlations were obtained between group rank and per cent graduating for each sex separately as well as for the combined group. It is noteworthy that none from the lowest group graduated, although several attended eight semesters, and only two (2 per cent) were graduated from group II. On the other hand, of group X there were graduated 31 per cent of the men, 17 per cent of the women, and 21 per cent of both sexes combined. Those graduating from the intervening groups ranged from 6 per cent to 12 per cent. Of all the groups there were graduated only 12 per cent of the men, 6 per cent of the women, and 7.8 per cent of all.

3. The per cent of the students eliminated from college attendance following the first semester was nearly four times as large for the three lowest groups as for the three highest groups. After the elimination following the first semester, however, less differences existed in this respect.

4. A much larger proportion of men than of women were eliminated with the first semester. Of the latter, a larger per cent of the original distribution remained in attendance during the first four semesters. Beginning with the fifth semester the men retained in attendance a larger per cent of the original distribution for each of the following semesters, including the eighth.

5. In spite of the fact that students of the lower groups are undoubtedly obliged to remain in attendance longer than those of more superior preparation in order to secure an equal number of credits, the median number of semesters the latter attended still was considerably higher than the median number of the former. Even though low correlations were secured between group rank and persistence, it is apparent from the data presented that a definite relationship does exist.

CHAPTER IV.

ACADEMIC SUCCESS IN RELATION TO PREPARATION.

Thus far in this study no mention has been made of the student's academic success in relation to his rank in preparation as measured by the entrance tests. A careful study of student success and failure in relation to group rank on the entrance tests has been made. Data presented in this chapter consider the first-named item from several points of view.

STUDENTS WHOSE RECORDS WERE STUDIED.

The distribution of students whose record of academic success and failure was studied for this report consisted of all the students who entered the Kansas State Teachers College of Emporia as freshmen each year from 1924 to 1928, inclusive. All their grades during the time of their attendance up to June, 1929, were taken into consideration.

GRADING SYSTEM OF THE COLLEGE.

The grades used by this college are A, B, C, D and F, which mean respectively superior, good, medium, inferior and failure. A student who officially withdraws from a course is recorded as having withdrawn. One who ceases to attend classes in a course without securing an official withdrawal is given a grade of F. This is the case even though he may have been doing passing work at the time he ceased attending classes. One who has done passing work in a course but has failed to complete all his required assignments, such as laboratory experiments or term papers, is marked incomplete. If this work is completed within eighteen weeks following the close of the semester, he is given a regular grade for his course. If, however, he fails to complete the work for which his grade was withheld, the incomplete mark automatically, and permanently, becomes F.

The official grading system of the College includes the suggestion that, in assigning grades, instructors should consider the following distribution as a standard or guide: A, 7 per cent; B, 18 per cent; C, 50 per cent; D, 18 per cent; and F, 7 per cent. While individual instructors and departments deviate from this standard in varying degrees, the grades actually assigned by the whole faculty in any semester or year approach this suggested standard distribution very closely.

These explanations have been given here so that the average grades made by the students of this college may be better comprehended and more intelligently interpreted.

Before the data of this chapter are presented, it should be observed that faculty members who had the students in their classes rarely, if ever, knew how their students ranked on the entrance tests. The grades which a student received in his courses were, therefore, in no way influenced by such a knowledge on the part of those assigning term grades.

FIRST SEMESTER ACADEMIC SUCCESS OF FRESHMEN.

Table XIX shows the data regarding academic success in relation to group rank on the entrance tests for the first semester of the freshman year. A study of this table shows that marked differences existed. By referring to column 3, for example, it will be seen that group I made only 1.6 per cent, and group II only 2.1 per cent hours of A grades, while group IX made 12.5 per cent, and group X 25.1 per cent hours of A grades. From column 4 it will be seen that the per cent of hours of B grades ranges from 7.3 per cent for group I to 36.3 per cent for group X. On the other hand, group I made 28.1 per cent hours of F grades and each succeeding higher group made a smaller per cent of this grade, while group X made only 2.4 per cent hours of F. Again, group I made 25.7 per cent hours of D grades and the per cent of this grade decreased consistently from group to group, group X making only 4.9 per cent hours of this grade. The per cent of hours of C grades was distributed more evenly over the groups, group X making the smallest per cent of these, namely 29.3 per cent, group I coming next in order with 32.1 per cent, and the remaining groups ranging from 39.9 per cent for group IX to 47.7 per cent for group VII.

It is not surprising that students of better preparation should make higher grades during their first semester in college. The differences, however, are exceedingly large. It is noteworthy that a few students of the poorest preparation level, group I, should succeed in making some of the highest grades, while some of the best equipped as to preparation, according to group ranking, should make D and F grades.

WITHDRAWALS AND INCOMPLETES.

Reference to column 8 of Table XIX shows that group I also had the largest per cent of withdrawals from courses and incompleted courses. The per cent for this group was 5.3 per cent. Only 2 per cent of the hours of the students of group X received marks of withdrawal or incomplete, and the intervening groups varied in this respect from 2.2 per cent for group VIII to 4.3 per cent for group III.

AVERAGE HOURS CARRIED, COMPLETED, AND PASSED.

Column 9 of Table XIX gives the average number of hours for which students of each group registered for their first semester. These range from 12.7 hours for group I to 15.3 hours for group VIII. It should be pointed out here that during part of the time covered by this study students of groups I, II and III were limited to 12, 13 and 14 hours respectively. During part of the time all carried, if they chose, a full program of 15 hours; and during part of the time those of the lower groups were advised to attempt only a limited program, but permitted to choose the number of hours they wished to attempt to carry up to 15 hours. This accounts for the smaller average number of hours which the students of these groups carried.

Again, students who ranked very low on the English entrance test were required for the first semester to register for a noncredit course known as preparatory English, which is the equivalent of a three-hour course in making

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TABLE XIX.—Relation between group rank and college success of students for the first semester of the freshman year.

(For five classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1928, inclusive.)

Group.	Number students.	Per cent hours of each grade made.						Average number hours carried.	Average number hours completed (A, B, C, D, or F grades).	Average number hours passed (A, B, C, D grades).	Average grade index.	Per cent meeting certification requirements.	Average number honor points.	Total semester hours carried.
		A	B	C	D	F	Withdrawn or incomplete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I.......	242	1.6	7.3	32.1	25.7	28.1	5.3	12.7	12.0	8.4	3.75	17.8	15.0	3,066
II.......	271	2.1	10.2	40.3	23.7	20.4	3.4	13.5	13.1	10.3	3.52	32.8	19.4	3,667
III.......	292	2.3	15.1	43.0	21.6	13.7	4.3	14.2	13.6	11.7	3.31	42.5	23.0	4,146
IV.......	278	3.2	16.3	45.3	19.3	12.1	3.8	14.7	14.2	12.4	3.22	48.2	25.3	4,098
V.......	302	4.4	19.0	45.4	18.2	8.9	4.2	14.8	14.2	12.9	3.08	55.6	27.2	4,470
VI.......	289	5.0	25.2	43.4	15.2	7.9	3.5	14.8	14.3	13.1	2.96	59.9	29.2	4,279
VII.......	267	6.0	26.2	47.7	10.6	6.7	2.6	14.8	14.4	13.4	2.86	74.9	30.8	3,940
VIII.......	266	8.6	29.6	44.2	10.6	4.9	2.2	15.3	15.0	14.2	2.73	75.9	33.9	4,069
IX.......	286	12.5	32.7	39.9	7.7	3.6	3.8	15.2	14.6	14.1	2.56	82.2	35.8	4,352
X.......	272	25.1	36.3	29.3	4.9	2.4	2.0	15.1	14.8	14.5	2.22	87.5	41.2	4,115

Read table thus: Of the 3,066 semester hours carried by the 242 students of group I, a grade of A was recorded in 1.6 per cent; a grade of B in 7.3 per cent; C in 32.1 per cent; D in 25.7 per cent; F in 28.1 per cent; and withdrawal or incomplete in 5.3 per cent. Students carried an average of 12.7 hours; completed an average of 12.0 hours; made passing grades in an average of 8.4 hours; and an average grade index of 3.75. Certification requirements were met by 17.8 per cent, and the average number of honor points earned per student was 15.0.

up the registration program. In computing the data for Table XIX this course was not taken into consideration.

Students of the higher groups were occasionally permitted to carry one extra hour by special permission. This accounts for the higher average hours attempted by the three highest groups.

Column 10 of Table XIX gives the average number of hours which students of each group actually carried to completion, or in which they received grades of A, B, C, D or F. These range from 12 hours for group I to 15 hours for group VIII. The difference between the number of hours carried, or enrolled for, and the number of hours completed is accounted for by the withdrawals and incompletes.

Column 11 gives the average number of hours in which the students of each group made passing grades; that is, grades of A, B, C or D. Group I, for example, while carrying to the end of the semester an average of only 12 hours, passed in only 8.4 hours, while group X passed in an average of 14.5 hours out of 14.8 completed; and group VIII made passing grades in 14.2 hours out of 15.0 hours completed. It will be seen, further, from column 11 of this table that each succeeding higher group, from I to X, except one, made a higher average number of hours of passing grades.

AVERAGE GRADE INDEX.

By assigning numerical values to each hour of each grade made by a student, point values, or a grade index, for the student's total grades are derived. In this study each hour of A was counted as 1; each hour of B, as 2; each hour of C, as 3; each hour of D, as 4; and each hour of F, as 5. The student's grade index is obtained by dividing the total number of points by the total number of hours. Thus a student making the following grades for a total of 15 hours would make 45 points and a grade index of 3.00: 3 hours A, 3 points; 2 hours B, 4 points; 5 hours C, 15 points; 2 hours D, 8 points; 3 hours F, 15 points. Total points, 45. Average number of points per hour, or grade index, 3.00.

Thus the poorer a student's grades are, the larger will be his grade index. One making all A grades would receive a grade index of 1; one making an average of C would have a grade index of 3, and so on. The grade index may be interpreted into an average letter grade as follows: 1.00 to 1.49, A; 1.50 to 2.49, B; 2.50 to 3.49, C; 3.50 to 4.49, D; 4.50 to 5.00, F.

It will be observed that the grade index for each succeeding group from I to X was lower than that of the preceding group. Each succeeding higher group excelled in average grades over the preceding lower ones. According to the grade index, the average grade of the students of group X was B; of groups VIII and IX C+; of groups IV to VII, C; of group III, C—; and of groups I and II, D.

PER CENT MEETING CERTIFICATION REQUIREMENTS.

The administration of the College maintains a rule that no certificate or degree will be given a student, irrespective of the number of credits he may have, unless 75 per cent of his grades, including F grades, are C or better. In column 13 of Table XIX are shown the per cent of each group who, during their first semester, met this requirement. It will be seen that of the 242 group I students only 17.8 per cent met this requirement. Only 32.8 per cent of

group II and 42.5 per cent of group III met this requirement. On the other hand, 82.2 per cent of the students of group IX and 87.5 of group X met this requirement.

HONOR POINTS.

Another way of considering the academic success of the students is to assign so-called honor points for each hour of each grade made. In this study this was done. For each hour of grade A a student made, he was given four honor points; for each hour of B, three honor points; for each hour of C, two honor points; and for each hour of D, one honor point. No honor point values were assigned for F grades. In this manner, a student making three hours of A, four hours of B, five hours of C, and three hours of D, would receive respectively 12, 12, 10 and 3, or a total of 37 honor points. One making 15 hours A would receive 60 honor points; one with 15 hours C would receive 30 honor points; and one with 15 hours of D would receive 15. In computing honor points the grades made, as well as the number of hours in which a student obtained passing grades, are taken into consideration.

Column 14 of Table XIX gives the average number of honor points made by the students of each group for their first semester's college attendance. As may be expected from the analysis of the grades made, and the number of hours in which the students made passing grades, each succeeding group, from I to X, made a higher average of honor points than any preceding lower groups. Group I made an average of 15; group II, 19.4; group IX, 35.8; and group X, 41.2.

SUMMARY.

All the data presented for these 2,765 students of the ten groups show that there was a close relationship between academic success and preparation on college entry as measured by the entrance tests. To what extent such a relationship existed during the student's college career following the first semester will now be shown.

ACADEMIC SUCCESS ACCORDING TO GROUP RANK FOLLOWING THE FIRST SEMESTER IN COLLEGE.

Tables XX to XXV show the data regarding the academic success for various periods following the students' first semester in college. All of these tables may be interpreted exactly as was Table XIX. Because of the similarity between these data and those analyzed for the first semester of the freshman year, only a few of the outstanding details will be pointed out in this discussion.

SECOND SEMESTER'S AND FRESHMAN YEAR'S ACADEMIC SUCCESS.

In Table XX the data for the second semester of the freshman year are shown. The students for whom these data are given are the same as those for whom the data for the first semester were given, except that their number has been decreased by the elimination of those who persisted in attendance but one semester. Table XXI gives the data for both the first and second semesters combined, or for the entire freshman year. For convenience in interpreting the data, the number of students of each group of each of the two semesters were added together. In this manner it was possible to present the data for the various years of college on a comparable "per semester" basis.

This plan was followed in computing the results presented in Tables XXI to XXV, inclusive.

It will be observed that the second semester acadamic success parallels very closely the first semester's success. Necessarily, therefore, the academic success for the whole freshman year parallels closely that of the first semester's success.

ACADEMIC SUCCESS OF SOPHOMORE YEAR.

The academic success of the sophomore year, the data for which are shown in Table XXII, also parallels closely that of the preceding semesters of the freshman year. The average hours passed range from 10.7 for group I to 14.2 for group X. The grade index range is from 2.26 for group X to 3.52 for group I. The range of per cent meeting certification requirements is from 26.4 per cent for group I to 87.9 per cent for group X; the range of honor points is from 20.0 for group I to 39.8 for group X.

ACADEMIC SUCCESS OF JUNIOR YEAR.

The data for the junior year for students who persisted in attendance to this rank in college likewise was almost a duplicate of that of preceding years. These data are shown in Table XXIII. The range of average hours passed was from 10.4 to 13.8; of grade index from 2.23 to 3.43; of per cent meeting certification requirements from 32.0 to 85.8. It will be seen that this per cent for the lowest group had increased from 17.8 per cent for the first semester of the freshman year to 32 per cent for the junior year. The range in average honor points per group varied between 20.2 and 39.1.

ACADEMIC SUCCESS OF THE SENIOR YEAR.

The data for the senior year almost duplicate those of preceding years. These data are shown in Table XXIV. The average hours passed by the different groups, however, was in this year more nearly the same for all groups, group X passing in only a trifle more hours on the average than group I. The range of grade index, also, was not so great. Moreover, there was not the consistent increase from group to group. Group V, for example, had a poorer average grade index than groups II, III and IV; and group X had a poorer one than group IX. While the higher groups made a poorer average grade index, the lower ones made a higher average grade index than in previous years. In this year 35.7 per cent of group I met certification requirements; and in group X, only 83.3 per cent met these requirements. In honor points, also, there was much less difference in this year than in the preceding years between lower and higher groups.

Group I undoubtedly made a better showing in the senior year than in the earlier years because presumably only the more successful students of the group persisted in attendance to this year of college. It will be seen that only 14 of this group were in attendance for the year, or 7 for each semester, while group X had an average of 27 for each semester.

TABLE XX.—Relation between group rank and college success of students for the second semester of the freshman year.

(For five classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1928, inclusive.)

Group.	Number students.	Per cent hours of each grade made.						Average number hours carried.	Average number hours completed (A, B, C, D, or F grades).	Average number hours passed (A, B, C, D grades).	Average grade index.	Per cent meeting certification require- ments.	Average number honor points.	Total semester hours carried.
		A	B	C	D	F	Withdrawn or incomplete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I........	199	1.0	8.8	42.5	26.1	18.1	3.5	14.1	13.6	11.0	3.53	29.1	19.9	2,801
II........	230	2.0	14.3	47.0	21.1	11.0	4.6	14.6	14.0	12.3	3.25	42.6	24.3	3,362
III........	263	3.2	19.1	45.3	17.7	10.3	4.3	14.8	14.1	12.6	3.13	52.9	26.4	3,890
IV........	250	4.1	22.8	47.8	14.1	8.8	2.3	14.8	14.5	13.2	3.01	63.2	28.9	3,710
V........	277	5.1	24.3	45.3	14.9	7.0	3.5	14.5	14.0	13.0	2.94	63.9	28.9	4,026
VI........	271	6.1	24.6	48.3	11.1	6.4	3.6	14.9	14.4	13.4	2.87	69.4	30.7	4,042
VII........	258	7.2	28.5	45.6	9.8	4.6	4.3	15.2	14.6	13.9	2.75	77.1	32.8	3,931
VIII........	262	9.1	31.4	41.7	11.0	4.5	2.3	15.3	14.9	14.2	2.70	76.3	34.3	4,001
IX........	273	12.0	34.7	39.4	7.3	4.2	2.4	15.2	14.8	14.2	2.56	81.0	36.2	4,146
X........	289	23.2	40.0	28.6	3.8	2.5	2.0	15.4	15.1	14.7	2.21	90.7	42.2	4,463

Read table thus: The 199 students in group I carried a total of 2,801 semester hours.   A grade of A was recorded in but 1.0 per cent of the hours; a grade of B in 8.8 per cent; a grade of C in 42.5 per cent; and so on.

TABLE XXI.—Relation between group rank and college success of students for the first and second semesters of the freshman year.

(For five classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1928, inclusive.)

Group.	Number semester students.	Per cent hours of each grade made per semester.						Average number hours carried per semester.	Average number hours per semester completed (A, B, C, D or F grades).	Average number hours per semester passed (A, B, C, D grades).	Average grade index.	Per cent per semester meeting certification require-ments.	Average number honor points per semester.	Total semester hours carried.
		A	B	C	D	F	With-drawn or incom-plete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I.............	441	1.3	8.0	37.0	25.9	23.3	4.4	13.3	12.7	9.6	3.65	22.9	17.2	5,869
II.............	501	2.0	12.1	43.5	22.4	15.9	4.0	14.0	13.5	11.2	3.40	37.3	21.6	7,030
III.............	555	2.7	17.1	44.1	19.7	12.0	4.3	14.5	13.9	12.1	3.22	47.4	24.6	8,037
IV.............	528	3.7	19.4	46.5	16.9	10.5	3.1	14.8	14.3	12.8	3.12	55.3	27.0	7,809
V.............	579	4.8	21.5	45.3	16.6	8.0	3.9	14.7	14.1	12.9	3.02	59.6	28.0	8,497
VI.............	560	5.5	24.9	45.7	13.1	7.2	3.5	14.9	14.3	13.3	2.91	64.5	29.9	8,322
VII.............	525	6.7	27.3	46.6	10.2	5.8	3.4	15.0	14.5	13.6	2.80	76.0	31.8	7,871
VIII.............	528	8.8	30.5	42.9	10.8	4.7	2.3	15.3	14.9	14.2	2.72	76.1	34.1	8,071
IX.............	559	12.3	33.7	39.6	7.5	3.9	3.1	15.2	14.7	14.1	2.56	81.6	36.0	8,499
X.............	561	24.1	38.2	29.0	4.3	2.5	2.0	15.3	15.0	14.6	2.21	89.1	41.8	8,579

Read table thus: The 441 semester students in group I carried a total of 5,869 semester hours. A grade of A was recorded in 1.3 per cent of the hours; a grade of B in 8.0 per cent; and so on.

TABLE XXII.—Relation between group rank and college success of students for the sophomore year.

(For four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Group.	Number semester students.	Per cent hours of each grade made per semester.						Average number hours carried per semester.	Average number hours per semester completed (A, B, C, D or F grades).	Average number hours per semester passed (A, B, C, D grades).	Average grade index.	Per cent per semester meeting certification requirements.	Average number honor points per semester.	Total semester hours carried.
		A	B	C	D	F	Withdrawn or incomplete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I............	163	2.2	8.7	39.6	23.6	18.8	7.1	14.5	13.5	10.7	3.52	26.4	20.0	2,364
II............	201	2.4	13.6	42.2	19.2	14.8	7.8	14.5	13.4	11.3	3.33	44.3	22.4	2,923
III............	202	5.2	17.6	48.0	17.0	8.0	4.3	14.9	14.2	13.1	3.05	56.4	27.8	3,004
IV............	183	5.9	20.0	49.3	14.6	7.8	2.4	15.0	14.6	13.4	2.98	65.0	29.5	2,740
V............	210	7.0	21.2	43.9	17.1	7.5	3.4	14.8	14.3	13.2	2.97	56.2	29.1	3,112
VI............	199	6.3	25.7	41.4	10.5	9.9	6.3	14.9	13.9	12.5	2.91	65.8	29.1	2,955
VII............	263	8.0	28.0	44.9	10.7	5.1	3.3	15.0	14.5	13.8	2.76	75.7	32.6	3,957
VIII............	261	9.3	30.7	43.9	8.8	4.5	2.6	14.7	14.3	13.6	2.68	81.2	33.2	3,830
IX............	260	12.4	36.8	36.5	7.0	3.6	3.7	15.1	14.5	14.0	2.51	81.5	36.2	3,920
X............	273	21.1	38.3	29.6	4.5	2.4	4.0	15.1	14.5	14.2	2.26	87.9	39.8	4,132

Read table thus: Of the 2,364 semester hours carried by the 163 semester students of group I, a grade of A was recorded in 2.2 per cent; B in 8.7 per cent; C in 39.6 per cent; and so on.

TABLE XXIII.—Relation between group rank and college success of students for the junior year.

(For three classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1926, inclusive.)

Group.	Number semester students.	Per cent hours of each grade made per semester.						Average number hours carried per semester.	Average number hours per semester completed (A, B, C, D or F grades).	Average number hours per semester passed (A, B, C, D grades).	Average grade index.	Per cent per semester meeting certification requirements.	Average number honor points per semester.	Total semester hours carried.
		A	B	C	D	F	Withdrawn or incomplete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I............	75	2.6	11.2	41.0	20.7	17.7	6.9	13.8	12.9	10.4	3.43	32.0	20.2	1,035
II...........	54	3.9	19.3	39.8	15.6	13.1	8.1	14.1	12.6	11.1	3.16	46.3	23.8	761
III..........	85	7.7	23.4	40.7	16.8	8.7	2.7	14.2	13.8	12.6	2.95	55.3	28.3	1,206
IV..........	65	4.8	23.0	45.2	14.9	7.3	4.7	14.9	14.2	13.1	2.97	67.7	28.9	970
V...........	82	6.7	26.3	43.9	12.6	6.1	4.3	14.1	13.5	12.6	2.84	63.4	29.1	1,158
VI..........	72	9.2	26.6	45.2	9.0	6.5	3.4	14.6	14.1	13.2	2.76	75.0	31.6	1,052
VII.........	93	12.6	30.4	35.7	12.2	5.3	3.8	14.5	13.9	13.2	2.66	64.5	32.7	1,347
VIII........	107	8.4	31.8	45.4	7.8	4.8	1.8	14.8	14.5	13.8	2.68	76.6	33.6	1,581
IX..........	110	16.4	35.6	33.2	5.5	4.0	5.2	14.7	14.0	13.4	2.42	81.8	36.0	1,613
X...........	120	23.8	34.7	30.0	5.0	2.0	4.6	14.8	14.1	13.8	2.23	85.8	39.1	1,776

Read table thus: Of the 1,035 semester hours carried by the 75 semester students of Group I, a grade of A was recorded in 2.6 per cent, a grade of B in 11.2 per cent; C in 41.0 per cent; and so on.

TABLE XXIV.—Relation between group rank and college success of students for the senior year.

(For two classes which entered the Kansas State Teachers College of Emporia in the years 1924 and 1925).

Group.	Number semester students.	Per cent hours of each grade made per semester.						Average number hours carried per semester.	Average number hours per semester completed (A, B, C, D or F grades).	Average number hours per semester passed (A, B, C, D grades).	Average grade index.	Per cent per semester meeting certification requirements.	Average number honor points per semester.	Total semester hours carried.
		A	B	C	D	F	Withdrawn or incomplete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I	14	1.0	12.6	45.4	27.8	10.5	2.6	13.6	13.2	11.8	3.35	35.7	21.9	190
II	19	5.0	18.0	49.6	21.4	3.2	2.8	14.8	14.4	13.8	3.00	63.2	28.8	280
III	40	9.6	21.5	43.9	12.5	9.9	2.6	15.2	14.8	13.3	2.91	65.0	30.8	606
IV	33	10.9	32.3	33.3	15.1	5.9	2.4	14.8	14.5	13.6	2.72	63.6	33.0	489
V	46	8.5	18.1	40.8	21.1	7.3	4.3	14.2	13.6	12.6	3.01	52.2	27.2	654
VI	32	6.1	26.5	42.7	12.1	8.7	3.9	14.4	13.8	12.6	2.91	56.3	29.0	461
VII	36	13.7	22.4	38.5	11.6	3.3	10.6	16.0	14.3	13.8	2.65	69.4	33.2	577
VIII	37	10.0	27.6	38.9	14.7	3.3	5.5	14.7	13.8	13.4	2.72	70.3	31.5	542
IX	26	13.9	35.0	39.5	7.4	2.9	1.3	14.6	14.4	14.0	2.50	76.9	36.1	380
X	54	12.5	33.7	35.1	5.9	6.3	6.3	14.3	13.4	12.5	2.57	83.3	32.6	774

Read table thus: Of the 190 semester hours carried by the 14 semester students of group I, a grade of A was recorded in 1.0 per cent; a grade of B in 12.6 per cent; C in 45.4 per cent; and so on.

TABLE XXV.—Relation between group rank and college success of students for total of freshman, sophomore, junior, and senior years.

(For five classes which entered the Kansas State Teachers College of Emporia during the years 1924 to 1928, inclusive.)

Group.	Number semester students.	Per cent hours of each grade made per semester.						Average number hours carried per semester.	Average number hours per semester completed (A, B, C, D or F grades).	Average number hours per semester passed (A, B, C, D grades).	Average grade index.	Per cent per semester meeting certification requirements.	Average number honor points per semester.	Total semester hours carried.
		A	B	C	D	F	Withdrawn or incomplete.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I	693	1.7	8.6	38.3	24.8	21.3	5.3	13.6	12.9	10.0	3.59	25.0	18.3	9,459
II	775	2.3	13.2	43.0	21.1	15.1	5.2	14.2	13.4	11.3	3.35	40.4	22.1	10,996
III	882	4.1	18.0	44.7	18.5	10.7	4.1	14.6	14.0	12.4	3.14	51.0	26.0	12,854
IV	809	4.6	20.3	46.5	16.1	9.4	3.0	14.8	14.4	13.0	3.06	58.8	28.0	12,009
V	917	5.6	21.7	44.7	16.6	7.7	3.8	14.6	14.1	13.0	2.99	58.8	28.3	13,423
VI	863	6.0	25.3	44.6	12.2	7.8	4.2	14.8	14.2	13.1	2.90	65.4	29.8	12,772
VII	917	7.9	27.6	44.7	10.6	5.4	3.7	15.0	14.4	13.6	2.77	74.5	32.2	13,755
VIII	933	8.9	30.5	43.3	10.1	4.7	2.4	15.0	14.7	14.0	2.70	77.4	33.7	14,025
IX	955	12.8	34.8	38.1	7.1	3.8	3.4	15.1	14.6	14.0	2.53	81.5	36.1	14,423
X	1,008	22.7	37.6	29.6	4.5	2.6	3.1	15.1	14.7	14.3	2.24	88.1	40.4	15,263

Read table thus: Of the 9,459 semester hours carried by the 693 semester students of group I, a grade of A was recorded in 1.7 per cent; B in 8.6 per cent; C in 38.3 per cent; and so on.

ACADEMIC SUCCESS OF ALL FOUR YEARS OF COLLEGE.

Table XXV gives the data regarding academic success for all four years of college. This table duplicates more nearly than the last two discussed the data pertaining to the first semester of the freshman year. It will be seen that the average grade index improved consistently from group to group, from the first to the tenth. The average grade index for group I for the four years was 3.59 or D, and for group X, 2.24 or B. Of group I, 25 per cent met certification requirements and of group X, 88.1 per cent met these requirements. Group I made an average of 18.3 honor points, and group X made 40.4.

The conclusion to be derived from these data, obviously, is that academic success is closely related to preparation at college entry as measured by entrance tests which the freshmen are required to take prior to registration for the first semester.

ACADEMIC EFFICIENCY IN TERMS OF AVERAGE HOURS OF FAILURE.

One way of considering academic efficiency of students is by comparing the average number of hours of failure per semester per student according to group rank on the entrance tests. These data have been computed and are shown in Table XXVI.

It will be seen from column 2 of this table that for the first semester of the freshman year the average number of hours of failure of students of group I was 3.6; of group II, 2.8; and of group III, 1.9. The average amount of failure of each succeeding higher group was less than the average of the preceding lower groups. The average hours of failure of each of the three highest groups was less than one hour, and for group X it was only .4 hour.

TABLE XXVI.—Average hours of failure per semester per student of each group.

Group.	Freshman, first semester.	Freshman, second semester.	Freshman, both semesters.	Sophomore year.	Junior year.	Senior year.	Four years of college.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I.......	3.6	2.5	3.1	2.7	2.4	1.4	2.9
II.......	2.8	1.6	2.2	2.2	1.9	.5	2.1
III.......	1.9	1.5	1.7	1.2	1.2	1.5	1.6
IV.......	1.8	1.3	1.6	1.2	1.1	.9	1.4
V.......	1.3	1.0	1.2	1.1	.9	1.0	1.1
VI.......	1.2	1.0	1.1	1.5	.9	1.3	1.2
VII.......	1.0	.7	.9	.8	.8	.5	.8
VIII.......	.8	.7	.7	.7	.7	.5	.7
IX.......	.5	.6	.6	.6	.6	.4	.6
X.......	.4	.4	.4	.4	.3	.9	.4

Read table thus: The average number of hours per semester in which students of group I failed was 3.6 in the first semester of the freshman year, 2.5 in the second semester of the freshman year, 3.1 for the entire freshman year, and so on.

The average number of hours of failure for group I was nine times as large as the average for group X, and the average number of hours for the three lowest groups combined was five times as large as the average for the three highest groups combined.

For the second semester of the freshman year the average number hours of failure for the lower groups was slightly smaller than for the first semester, but the student of group I still failed on the average in six times as many hours as the student of group X; and those of the three lowest groups combined failed in more than three times as many hours as those of the three highest groups combined.

For the entire freshman year the average number of hours of failure per student per semester was practically the same as for the first semester.

By referring to column 5 of Table XXVI it will be observed that the average hours of failure of the various groups were again nearly the same as for the freshman year. The average for group I was lower than for the first semester of the freshman year and for the entire freshman year, but nearly equal to the average of the second semester of the freshman year. The only exception marring perfect correlation between group rank and average hours of failure was furnished by group VI, whose average hours of failure exceeded the average of each of the three preceding lower groups.

In the junior year each succeeding higher group again had a lower average number hours of failure than each preceding group, except that groups V and VI were equal in this respect.

The senior year, however, furnished several notable exceptions. In the first place, groups I and II had much lower averages than these groups had in the preceding years, while group X had more than doubled its average hours of failure. In fact, group X's average was higher than the average of each of the groups II, VII, VIII and IX, and only slightly less than the average of group I. Moreover, the average hours of failure for the three lowest groups combined was less than twice as large as the average for the three highest groups.

In column 8 of Table XXVI the average hours of failure per student of each group, per semester, for the four years of college are shown. It will be observed that these data are nearly a duplication of the data shown in column 5, the averages for the freshman year. The average hours of failure for group I was 2.9, and this was more than seven times as large as the average for the four years of group X. The average for the three lowest groups combined was four times as large as the average for the three highest groups combined.

It is evident that group rank on entrance tests is a valid criterion for predicting academic efficiency.

ACADEMIC EFFICIENCY IN TERMS OF PER CENT PASSING GRADES OBTAINED.

Another way of considering academic efficiency is in terms of the per cent of average hours of passing grades the students of a given group obtained of the hours carried. These per cents were computed for each group for each of the two semesters of the freshman year, for each year of college, and for all four years of college combined. These data are shown in Table XXVII.

In computing these per cents the hours of withdrawal and incompletes

were deducted from the load for which the student registered. These per cents then show the efficiency of the students of each group in the courses they actually attempted to complete rather than in those which they attempted to carry at the time of registration.

It will be seen that the percentage of efficiency thus measured varied between 70 per cent and 98 per cent for the first semester of the freshman year, each succeeding higher group from the first to the tenth, with no exception, obtaining a higher percentage than each group immediately below it in rank. In the succeeding semesters and years of college, group I, as well as the others of the lower groups, secured somewhat higher per cents in this respect; but only in the senior year did some of the lower groups succeed in obtaining a higher percentage of efficiency than did some of the higher groups. Groups VI and X obtained unusually low per cents in the senior year. The percentage of efficiency of group I had advanced from 70 per cent for the first semester of the freshman year to 89 per cent for the senior year.

For the four years of college the percentage of efficiency varied between 78 per cent for group I to 97 per cent for group X, with perfect correlation between group rank and the per cents.

Still another way of considering academic efficiency is in terms of the average hours in which students obtained passing grades in relation to the average student load. At this college 15 hours is considered a normal student load. Hence for this part of the study the per cent that the average number of hours passed was of 15 hours was computed. These data are shown in Table XXVIII.

It will be observed that these data are in many ways comparable to those shown in Table XXVII, except that they show the lower groups as having even less efficiency than was evident from Table XXVII. If a student carries fewer hours than a normal load, he must necessarily remain in college longer,

TABLE XXVII.—Per cent of passing grades obtained in courses completed by students of each group.

Group.	Freshman, first semester.	Freshman, second semester.	Freshman, both semesters.	Sophomore year.	Junior year.	Senior year.	Four years of college.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I.......	70	81	76	79	81	89	78
II.......	79	88	83	84	86	96	84
III.......	86	89	87	92	91	90	89
IV.......	87	91	90	92	92	94	90
V.......	91	93	91	92	93	93	92
VI.......	92	93	93	90	94	91	92
VII.......	93	95	94	95	95	97	94
VIII.......	95	95	95	95	95	97	95
IX.......	96	96	96	97	96	97	96
X.......	98	97	97	98	98	93	97

Read table thus: In the courses which they completed—that is, did not receive marks of withdrawal or incomplete—the students of group I made passing grades (A, B, C or D) in 70 per cent in the first semester of the freshman year, in 81 per cent in the second semester of the freshman year, in 76 per cent in the entire freshman year, and so on.

TABLE XXVIII.—Per cent that hours of passing grades which students obtained were of normal college load of 15 hours.

Group.	Freshman, first semester.	Freshman, second semester.	Freshman, both semesters.	Sophomore year.	Junior year.	Senior year.	Four years of college.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I.......	56	73	64	71	69	79	67
II.......	69	82	75	75	74	92	75
III.......	78	84	81	87	84	89	83
IV.......	83	88	85	89	87	91	87
V.......	86	87	86	88	84	84	87
VI.......	87	89	89	83	88	84	87
VII.......	89	93	91	92	88	92	91
VIII.......	95	95	95	91	92	89	93
IX.......	94	95	94	93	89	93	93
X.......	97	98	97	95	92	83	95

Read table thus: Considering 15 hours as a normal student load, the hours in which group I students obtained passing grades in the first semester were 56 per cent of that normal load; 73 per cent the second semester; and so on.

other things being equal, to secure the same number of credits other students acquire in the normal period outlined by the college. Therefore it seems justifiable to consider, for example, the efficiency of group I students for the college course as being only 67 per cent as compared with 95 per cent for group X students.

If an efficiency per cent or index were desired, undoubtedly the per cents of Table XXVIII would in some ways be more serviceable than those of Table XXVII.

ACADEMIC EFFICIENCY AS MEASURED BY PER CENT MEETING CERTIFICATION REQUIREMENTS.

The chief criterion for measuring efficiency, however, should be the per cent meeting certification requirements. Passing grades are of no value to a student unless he is able to obtain thereby what he seeks. It was pointed out previously that a certificate or degree is not granted a student unless 75 per cent of his grades are C or better.

In Tables XIX to XXV the number and per cent meeting certification requirements were given for the several college years. For purposes of comparison these per cents are here summarized in Table XXIX. From this table it will be seen that the true efficiency of some of the lower groups was not nearly so good as it appeared from the data presented in the two preceding tables, poor as it may have appeared from those data. When it is considered that the least efficient students were eliminated at an early date it is somewhat astonishing that those few who persisted to the senior year in attendance still were only 35.7 per cent efficient in that year, in respect to meeting certification requirements, and only 25 per cent for the four years of college.

TABLE XXIX.—The per cent from each group meeting certification requirements for each college year.

Group.	Freshman, first semester.	Freshman, second semester.	Freshman, both semesters.	Sophomore year.	Junior year.	Senior year.	Four years of college.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I.......	17.8	29.1	22.9	26.4	32.0	35.7	25.0
II.......	32.8	42.6	37.3	44.3	46.3	63.2	40.4
III.......	42.5	52.9	47.4	56.4	55.3	65.0	51.0
IV.......	48.2	63.2	55.3	65.0	67.7	63.6	58.8
V.......	55.6	63.9	59.6	56.2	63.4	52.2	58.8
VI.......	59.9	69.4	64.5	65.8	75.0	56.3	65.4
VII.......	74.9	77.1	76.0	75.7	64.5	69.4	74.5
VIII.......	75.9	76.3	76.1	81.2	76.6	70.3	77.4
IX.......	82.2	81.0	81.6	81.5	81.8	76.9	81.5
X.......	87.5	90.7	89.1	87.9	85.8	83.3	88.1

Read table thus: Of the students of group I, 17.8 per cent met certification requirements the first semester; 21.1 the second semester; 22.9 the first year; and so on.

Group II and each of the succeeding higher groups were academically more efficient than group I. It is apparent that the greatest difference in this respect from one group to the next higher one was between group I and group II, that of the latter being 15 per cent higher than that of the former for the four years, and from 14 per cent to 27 per cent for the single years of college. Group X easily maintained the highest percentage of efficiency regarding those who met certification requirements for each year and for the four years of college.

ACADEMIC SUCCESS OF INDIVIDUAL STUDENTS IN RELATION TO GROUP RANK.

Thus far in the consideration of academic success according to rank on entrance tests, the following named factors have been taken into account: Average grades of groups, the number of hours of each grade made by groups, the average number of hours failure by groups, and the percentage efficiency by groups. The single exception to this rule were the data pertaining to the number of students meeting certification requirements, found in Table XXIX.

In the preceding data, for example, it was shown that the average grade made by group I students for the first semester in college was D. Moreover, it was also shown that only 1.6 per cent of the hours of this group for the first semester were grades of A, and 7.3 per cent were grades of B, and so on. This at once raises the question as to what was the highest average grade of any single student of this group. Moreover, one also becomes curious as to what were the lowest average grades, for example, of groups IX and X.

It is therefore pertinent to present a few data dealing explicitly with the average grades made by individuals of the several groups. Table XXX gives the distribution of average grades made by the men of each group during the first semester of the freshman year. Table XXXI presents the same data for the women for this semester, and Table XXXII, for both men and women who attended college during both semesters of the freshman year.

It will be seen from Table XXX that four men of group I made average grades of B during their first semester in college. One of these made a grade index of 1.75, two made a grade index of 2.00, and one a grade index of 2.25.

By referring to column 3 of Table XXXI it will be seen that three women of group I also made average grades of B for this semester, the grade index of these being 2.25. Moreover, by referring to column 3 of Table XXXII it will be seen that four students of this group each made an average grade of B for the entire freshman year.

From these tables it will be observed, further, that a few from each group made very high average grades for the first semester as well as for the entire freshman year. More of the students of the higher groups, of course, made high average grades; and some from group X made very high average grades; but it is notable that those of the highest groups did not have a monopoly upon all of the most desirable grades.

It is likewise true that the students of the lowest groups did not have an exclusive monopoly on all of the lowest grades. During the first semester at least some of the men from each group made average grades of F, and some of the women from each group, excepting the three highest, also made average grades of F.

Of those who persisted in attendance during both semesters of the freshman year few made average grades of F for the entire year. On the whole, however, it will be seen that for each group the range of average grades made was quite large, and the distributions for the several groups were alike to a greater extent than they are different. The overlapping of the same average grades for the ten groups is one of the outstanding characteristics of these three tables.

A comparison of the average grades of the men and the women for the first semester shows that, while the former made practically the same proportion of high average grades as the latter, the men made a much larger proportion of very low average grades than did the women. For example, 28 per cent of the men of group I made average grades of F, while only 12 per cent of the women of group I made an average grade of F. In group II the ratio of F grades between men and women was 19 per cent to 4 per cent, and in group III it was 16 per cent to 4 per cent.

INDIVIDUAL AVERAGE GRADES OBTAINED BY SOPHOMORES.

The individual average grades obtained by the men of each group during the sophomore year are shown in Table XXXIII and those obtained by the sophomore women are shown in Table XXXIV.

The data for these two groups for their second college year are not greatly dissimilar to those shown for the freshman year. Both men and women from nearly every group obtained some high average grades, but from the lowest group none obtained an average above a C. In nearly every group a few obtained very low average grades. On the whole there were proportionally more high average grades obtained by those of the higher groups than by those of the lower groups. It is notable, however, that considering both the men and the women a few from the lowest five groups made very high average grades during the sophomore year. That a few very high average grades were obtained by both sexes of groups IX and X is not surprising after the foregoing discussions.

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TABLE XXX.—Distribution of average grades made by the men of each group during the first semester of the freshman year.

(For five classes who entered the Kansas State Teachers College of Emporia in the years 1924 to 1928, inclusive.)

Grade	Grade index	Groups																			
		I		II		III		IV		V		VI		VII		VIII		IX		X	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A....	1.00											1	1.2							4	6.2
	1.25							1	1.3					3	5.1			3	4.6	3	4.6
B....	1.50	1	1.3			1	1.0			2	2.3									3	4.6
	1.75							1	1.3	1	1.2					1	1.9	1	1.5	3	4.6
	2.00	2	2.5			2	2.1	4	5.3	4	4.6	5	6.2	4	6.8	5	9.3	1	1.5	9	13.8
	2.25	1	1.3	2	2.3	2	2.1			3	3.5	3	3.7	3	5.1	5	9.3	4	6.2	12	18.5
C....	2.50	1	1.3	1	1.2	7	7.3	4	5.3	10	11.6	7	8.6	9	15.2	4	7.4	7	10.8	7	10.8
	2.75	7	8.8	3	3.4	11	11.4	7	9.2	8	9.3	11	13.6	4	6.8	13	24.1	9	13.8	4	6.2
	3.00	5	6.3	14	16.1	16	16.7	9	11.8	16	18.6	14	17.3	9	15.2	1	1.9	12	18.5	5	7.7
	3.25	5	6.3	10	11.5	14	14.6	9	11.8	8	9.3	7	8.6	1	1.7	7	13.0	6	9.2	4	6.1
D....	3.50	9	11.4	14	16.1	13	13.5	10	13.2	9	10.5	10	12.4	10	17.0	6	11.1	3	4.6	4	6.2
	3.75	11	13.9	10	11.5	5	5.2	6	7.9	10	11.6	10	12.4	1	1.7	3	5.5	1	1.5	1	1.5
	4.00	12	15.2	8	9.2	5	5.2	6	7.9	2	2.3	2	2.5	8	13.5	3	5.5	4	6.2	1	1.5
	4.25	3	3.8	8	9.2	5	5.2	5	6.6	3	3.5	6	7.4	1	1.7	2	3.7	4	6.2	2	3.1
F....	4.50	4	5.1	3	3.4	4	4.2	5	6.6	5	5.8	1	1.2	3	5.1	1	1.8	4	4.6	1	1.5
	4.75	9	11.4	1	1.2			2	2.6	1	1.2	1	1.2							2	3.1
	5.00	9	11.4	13	14.9	11	11.5	7	9.2	4	4.7	3	3.7	3	6.1	3	5.5	3	4.6		
Total....		79		87		96		76		86		81		59		54		65		65	
Median grade index....		3.94		3.74		3.45		3.58		3.24		3.24		3.18		2.98		3.01		2.47	

Read table thus (column 3): One of the group I men, or 1.3 per cent from this group, made a grade index of 1.75; two others, or 2.5 per cent, each made a grade index of 2.00; and one other made a grade index of 2.25. The grade average of these four was B. The rest of this column, as well as the remaining columns, is read in like manner.

TABLE XXXI.—Distribution of average grades made by the women of each group during the first semester of the freshman year.

(For five classes who entered the Kansas State Teachers College of Emporia in the years 1924 to 1928, inclusive.)

Grade.	Grade index.	I		II		III		IV		V		VI		VII		VIII		IX		X	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A.....	1.00															1	.5	2	.9	7	3.4
	1.25							2	1.0							4	1.9	10	4.6	25	12.1
B.....	1.50					1	.5			3	1.4	2	1.0	11	5.4	7	3.3	10	4.6	24	11.7
	1.75							2	1.0	8	3.9	10	5.0	11	5.4	19	9.0	17	7.9	29	14.1
	2.00			6	3.3	6	3.2	6	3.0	11	5.3	18	8.9	20	9.7	15	7.1	38	17.6	38	18.4
	2.25	3	1.9	7	3.9	16	8.5	15	7.6	15	7.3	22	10.9	27	13.2	33	15.7	38	17.6	32	15.5
C.....	2.50	3	1.9	8	4.4	20	10.6	32	16.2	28	13.5	33	16.3	35	17.1	46	21.9	53	24.5	20	9.7
	2.75	5	3.1	16	8.9	24	12.7	35	17.7	31	15.0	31	15.3	38	18.5	23	10.9	15	7.0	10	4.9
	3.00	27	17.0	36	20.0	35	18.5	32	16.2	50	24.2	33	16.3	30	14.6	34	16.2	20	9.3	12	5.8
	3.25	24	15.1	30	16.7	30	15.9	27	13.6	21	10.1	22	10.9	17	8.3	13	6.2	3	1.4	5	2.4
D.....	3.50	21	13.2	21	11.7	19	10.0	21	10.6	17	8.2	17	8.4	6	2.9	10	4.8	7	3.2	3	1.5
	3.75	25	15.7	22	12.2	14	7.4	10	5.1	6	2.9	8	4.0	3	1.4	2	1.0	2	.9		
	4.00	22	13.9	14	7.8	13	6.9	7	3.5	12	5.8			2	1.0	2	1.0	1	.5	1	.5
	4.25	10	6.3	13	7.2	4	2.1	4	2.0	3	1.4			2	1.0	1	.5				
F.....	4.50	8	5.0	2	1.1	4	2.1	3	1.5	1	.5	1	.5	1	.5						
	4.75	4	2.5	2	1.1	2	1.1	1	.5			1	.5								
	5.00	7	4.4	3	1.7	1	.5	1	.5	1	.5	4	2.0	2	1.0						
Totals................		159		180		189		198		207		202		205		210		216		206	
Median grade index....		3.71		3.39		3.20		3.05		3.04		2.88		2.74		2.64		2.45		2.12	

Read table thus (column 3): Three of the group I women, or 1.9 per cent, made a grade index of 2.25; three others made a grade index of 2.50; and five others, or 3.1 per cent, made a grade index of 2.75. The grade average of the first three of these students was B and of the other eight, C. The rest of this column, as well as the remaining columns, is read in like manner.

TABLE XXXII.—Distribution of average grades made by the men and women of each group during the freshman year.

(For five classes of students who entered the Kansas State Teachers College of Emporia in the years 1924 to 1928, inclusive.)

Grade	Grade index	I (3) No.	%	II (4) No.	%	III (5) No.	%	IV (6) No.	%	V (7) No.	%	VI (8) No.	%	VII (9) No.	%	VIII (10) No.	%	IX (11) No.	%	X (12) No.	%
(1)	(2)																				
A	1.00																			10	3.9
	1.25							1	.5					1	.4	2	.8	6	2.4	15	5.9
B	1.50							1	.5	5	2.0	2	.8	5	2.1	4	1.6	12	4.7	35	13.7
	1.75					2	.9	2	.9	4	1.6	6	2.4	13	5.5	17	6.9	9	3.5	37	14.5
	2.00	1	.6	3	1.5	9	3.9	9	4.1	12	4.7	19	7.8	24	10.2	30	12.3	49	19.4	40	15.7
	2.25	3	1.8	8	4.2	15	6.5	21	9.6	29	11.5	32	13.1	32	13.6	48	19.6	47	18.6	42	16.5
C	2.50	6	3.6	13	6.8	23	10.0	37	17.0	33	13.0	45	18.4	45	19.2	33	13.5	49	19.4	34	13.3
	2.75	8	4.8	16	8.4	31	13.5	33	15.1	42	16.6	34	13.9	44	18.7	38	15.5	32	12.6	18	7.1
	3.00	29	17.3	38	19.9	53	23.0	40	18.3	50	19.8	34	13.9	33	14.1	30	12.3	21	8.3	10	3.9
	3.25	28	16.6	44	23.0	32	13.9	30	13.8	34	13.4	39	15.9	16	6.8	21	8.6	9	3.5	10	3.9
D	3.50	38	22.6	30	15.7	32	13.9	21	9.6	14	5.5	18	7.3	9	3.8	12	4.9	10	4.0	2	.8
	3.75	25	14.9	16	8.4	16	7.0	8	3.7	14	5.5	8	3.3	3	1.3	3	1.2	5	2.0	2	.8
	4.00	18	10.7	15	7.9	9	3.9	9	4.1	9	3.6	4	1.6	7	3.0	5	2.0	3	1.2		
	4.25	9	5.3	7	3.7	5	2.2	3	1.4	5	2.0	3	1.2	3	1.3	2	.8	1	.4		
F	4.50	3	1.8	1	.5	2	.9	2	.9	2	.8	1	.4								
	4.75																				
	5.00					1	.4	1	.5												
Totals		168		191		230		218		253		245		235		245		253		255	
Median grade index		3.56		3.35		3.17		3.03		3.00		2.89		2.74		2.66		2.52		2.43	

Read table thus (column 3): One student, or .6 per cent of the students of group I, made a grade index of 2.00; three others made a grade index of 2.25. The grade average of these four was B. The rest of this column, as well as the remaining columns, is read likewise.

TABLE XXXIII.—Distribution of average grades made by the men of each group during the sophomore year.

(For four classes who entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Grade.	Grade index.	Groups.																			
		I		II		III		IV		V		VI		VII		VIII		IX		X	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A....	1.00									1	4.0										
	1.25					1	4.0			1	4.0							1	4.5	2	7.1
B....	1.50											1	5.0					1	4.6	2	7.1
	1.75							1	8.3			1	5.0	2	9.5			2	9.1	7	25.0
	2.00					2	8.0			3	12.0	1	5.0			3	16.7	2	9.1	7	25.0
	2.25					1	4.0	1	8.3	1	4.0	1	5.0	3	14.3	1	5.6	3	13.6		
C....	2.50	1	5.3	1	4.8	2	8.0			3	12.0	5	25.0	4	19.0	2	11.1	5	22.7	1	3.6
	2.75	3	15.8	3	14.3	4	16.0	2	16.7	2	8.0	2	10.0	3	14.3	4	22.2	3	13.6	4	14.2
	3.00	4	21.0	4	19.0	8	32.0	2	16.7	8	32.0	1	5.0	5	23.8	4	22.2				
	3.25			3	14.3	5	20.0	4	33.4	2	8.0	1	5.0	2	9.5	2	11.1			1	3.6
D....	3.50	4	21.1	6	28.6	1	4.0	1	8.3	1	4.0	1	5.0	1	4.8			1	4.5	3	10.7
	3.75	2	10.5	1	4.8					2	8.0			1	4.8	1	5.6	2	9.1	1	3.6
	4.00	2	10.5	1	4.7	1	4.0			1	4.0	3	15.0			1	5.5				
	4.25	1	5.3	2	9.5							2	10.0					1	4.6		
F....	4.50	2	10.5					1	8.3									1	4.6		
	4.75											1	5.0								
	5.00																				
Totals..............		19		21		25		12		25		20		21		18		22		28	
Median grade index....		3.59		3.46		3.08		3.25		3.05		2.88		2.88		2.94		2.51		2.11	

Read table thus (column 3): One of the group I men, or 5.3 per cent from this group, made a grade index of 2.50; three others, or 15.8 per cent, each made a grade index of 2.75; and four others, or 21.1 per cent, each made a grade index of 3.00. The grade average of these eight was C. The rest of this column, as well as the remaining columns, is read in like manner.

TABLE XXXIV.—Distribution of average grades made by the women of each group during the sophomore year.

(For four classes who entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Grade.	Grade index.	I		II		III		IV		V		VI		VII		VIII		IX		X	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A.....	1.00																			2	2.8
	1.25									1	2.0							1	1.4	5	6.9
B.....	1.50			1	2.4							2	5.1	3	4.2	6	8.1	1	1.4	7	9.7
	1.75							1	2.2	4	8.2	1	2.6	4	5.6	6	8.1	9	12.5	11	15.3
	2.00			1	2.4			3	6.7	2	4.1	2	5.1	5	7.1	7	9.5	18	25.0	12	16.7
	2.25					2	5.9	4	8.9	3	6.1	9	23.1	11	15.5	12	16.2	12	16.7	17	23.6
C.....	2.50	1	3.6	5	12.2	3	8.8	9	20.0	6	12.2	8	20.5	14	19.7	14	18.9	14	19.4	6	8.3
	2.75	3	10.7	5	12.2	12	35.3	10	22.2	11	22.4	9	23.1	15	21.1	11	14.9	6	8.3	6	8.3
	3.00	3	10.7	3	7.3	9	26.5	7	15.6	4	8.2	4	10.2	8	11.3	7	9.5	6	8.3	2	2.8
	3.25	5	17.9	11	26.8	2	5.9	6	13.3	10	20.4	2	5.1	7	9.9	5	6.8	1	1.4	1	1.4
D.....	3.50	9	32.1	7	17.1	3	8.8	3	6.7	2	4.1	1	2.6			1	1.3	3	4.2	1	1.4
	3.75	5	17.8	4	9.8	2	5.9	1	2.2	4	8.2					3	4.1	1	1.4	1	1.4
	4.00	1	3.6	2	4.9			1	2.2	2	4.1	1	2.6	2	2.8						
	4.25	1	3.6	2	4.9									1	1.4	1	1.3				
F.....	4.50					1	2.9							1	1.4	1	1.3				
	4.75																			1	1.4
	5.00																				
Totals...............		28		41		34		45		49		39		71		74		72		72	
Median grade index....		3.56		3.38		3.00		2.89		2.94		2.67		2.72		2.61		2.40		2.23	

Read table thus (column 3): One of the group I women, or 3.6 per cent from this group, made a grade index of 2.50; three others, or 10.7 per cent, made a grade index of 2.75; three others made a grade index of 3.00; and five others, or 17.9 per cent, made a grade index of 3.25. The grade average of these twelve was C. The rest of this column, as well as the remaining columns, is read in like manner.

TABLE XXXV.—Distribution of average grades made by the men and women of each group during the freshman and sophomore years.

(For four classes who entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Grade.	Grade index.	I		II		III		IV		V		VI		VII		VIII		IX		X	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A....	1.00																			2	2.2
	1.25																	1	1.2	7	7.9
B....	1.50									2	3.3			2	2.5			2	2.3	8	9.0
	1.75			1	2.0	1	2.1			1	1.7	3	5.9	3	3.7	5	6.0	4	4.6	18	20.2
	2.00					4	8.3	2	4.2	5	8.3	2	3.9	9	11.1	13	15.7	20	23.0	13	14.6
	2.25			2	4.1	1	2.1	5	10.4	4	6.7	9	17.7	14	17.3	13	15.7	22	25.3	19	21.4
C....	2.50	1	2.7	2	4.1	6	12.6	9	18.7	11	18.3	12	23.5	15	18.5	15	18.1	16	18.4	8	9.0
	2.75	3	8.1	6	12.2	12	25.0	8	16.7	10	16.7	8	15.7	19	23.5	19	22.9	9	10.3	9	10.1
	3.00	9	24.3	10	20.4	13	27.1	16	33.3	13	21.7	7	13.7	9	11.1	9	10.8	4	4.6	2	2.2
	3.25	4	10.8	12	24.5	5	10.4	3	6.2	5	8.3	5	9.8	4	4.9	6	7.2	4	4.6	1	1.1
D....	3.50	11	29.8	10	20.4	3	6.2	2	4.2	6	10.0	2	3.9	3	3.7	2	2.4	3	3.4	2	2.3
	3.75	3	8.1	4	8.2	3	6.2	1	2.1	3	5.0			1	1.2	1	1.2				
	4.00	6	16.2	2	4.1			2	4.2					2	2.5			2	2.3		
	4.25											2	3.9								
F....	4.50											1	2.0								
	4.75																				
	5.00																				
Totals..............		37		49		48		48		60		51		81		83		87		89	
Median grade index....		3.53		3.32		3.00		3.00		2.93		2.74		2.71		2.68		2.44		1.96	

Read table thus (column 3): One of the group I students, or 2.7 per cent from this group, made a grade index of 2.50; three others, or 8.1 per cent, each made a grade index of 2.75; nine others, or 24.3 per cent, each made a grade index of 3.00; and four others, or 10.8 per cent, each made a grade index of 3.25. The grade average of these 17 was C. The rest of this column, as well as the remaining columns, is read in like manner.

TABLE XXXVI.—Distribution of average grades made by the students of each group for the four years of college.

(For all students entering the Kansas State Teachers College of Emporia in 1924 and thereafter who reached senior standing prior to September, 193( )

Grade	Grade index.	I		II		III		IV		V		VI		VII		VIII		IX		X		Total.	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)		(13)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A.....	1.00																			2	2.8	2	.6
	1.25					1	3.5							1	2.6			2	3.8	6	8.3	10	2.7
B.....	1.50					1	3.5			2	5.0	1	3.7	3	7.7	1	1.8	3	5.7	4	5.6	15	4.1
	1.75									4	10.0	3	11.1	5	12.8	5	9.1	7	13.2	15	20.8	39	10.7
	2.00							6	26.1			1	3.7	2	5.1	9	16.4	11	20.8	15	20.8	44	12.1
	2.25	1	9.1			3	10.4	4	17.4	7	17.5	5	18.5	5	12.8	14	25.5	13	24.5	17	23.6	69	18.9
C.....	2.50			1	6.3	10	34.5	5	21.7	2	5.0	5	18.5	12	30.8	7	12.7	6	11.3	7	9.7	55	15.1
	2.75	1	9.1	6	37.5	5	17.3	1	4.3	7	17.5	6	22.2	5	12.8	12	21.8	9	17.0	4	5.6	56	15.3
	3.00	4	36.4	4	25.0	8	27.6	5	21.7	12	30.0	3	11.1	4	10.3	5	9.1	1	1.9	2	2.8	48	13.2
	3.25	4	36.4	4	25.0			2	8.7	3	7.5	3	11.1	2	5.1	1	1.8	1	1.9			20	5.5
D....	3.50	1	9.1							2	5.0					1	1.8					4	1.1
	3.75			1	6.3	1	3.5			1	2.5											3	.8
	4.00																						
	4.25																						
F.....	4.50																						
	4.75																						
	5.00																						
Totals.........		11		16		29		23		40		27		39		55		53		72		365	
Median index...		3.22		3.06		2.74		2.58		2.93		2.68		2.57		2.47		2.32		2.15		2.52	

Read table thus (column 3): One of the group I students, or 9.1 per cent of this group, made a grade index of 2.25; one made a grade index of 2.75; four others, or 36.4 per cent, made a grade index of 3.00; and four others, of 3.25. The grade average of the first of these was B, and of the other nine, C. The rest of this column, as well as the remaining columns, is read in like manner.

INDIVIDUAL AVERAGE GRADES OBTAINED DURING BOTH THE FRESHMAN AND SOPHOMORE YEARS.

Table XXXV shows the distribution of average grades obtained during the first two years of college by both men and women. It will be seen that only one student obtained an average grade of less than D for the two-year period. Only ten obtained average grades of A and all but one of these belonged to group X, the one exception belonging to group IX. Average grades of B, however, were obtained by students from each group except the lowest. A careful scrutiny of the number of students making B average grades shows that over half of all average grades of B were obtained by students of the two highest groups, while the students of the five lowest groups obtained only one-seventh of all the average grades of B. On the other hand, it will be seen that nearly half of all average grades of D were obtained by students of groups I and II.

INDIVIDUAL AVERAGE GRADES FOR FOUR YEARS OF COLLEGE.

In Table XXXVI is shown the distribution of average grades which students obtained from the freshman year to the senior year of college, inclusive. For this table the average grades were computed for all students who entered college as freshmen in 1924 or thereafter, who had by September, 1930, accumulated at least 90 semester hours of credits. According to the adopted regulations of the college, a student must have a minimum of 90 hours credit to be classified as a senior.[1]

A goodly number of the students whose average grades are included in this table had graduated by 1930. Others lacked but a few hours of having the required number of credits to be eligible for graduation, and some required a full additional year's work.

In the first place, it should be noted that six and one-half times as many students of group X had accumulated 90 hours or more of credit than of group I, and that there was a fairly consistent increase from lower to higher groups in the number of students from each group who had accumulated this number of credits.

No student of this distribution obtained an F average grade for this period.[2] In the first place, none with an F average would be tolerated in attendance such a long period; and none maintaining an F average would be likely to remain in attendance so long. In the second place, should a student have an F average, he would hardly also have 90 hours or more of credit, the criterion set up for admitting an average grade into the table.

Only 7 of the 365 students whose records were available for this table obtained average grades of D. As already indicated, students failing to make a sufficient proportion of high grades to meet certification requirements (grades of C or better in 75 per cent or more of the hours) infrequently remain in attendance to acquire senior standing.

1. Ninety hours credit was selected as a criterion in preference to a given number of semesters attendance, because attendance at summer school for eight-week terms or four-week terms, carrying less than a full program, and other factors, tend to make the latter plan too involved for making a careful selection.

2. A grade of F, which was later raised to a passing grade by repeating the course, was in this study counted as F and also as the passing grade later obtained.

Twelve students obtained average grades of A. Eight of these were group X students, two were group IX students, and groups VII and III each claimed one. That the more desirable average grades were obtained in greater proportion by higher ranking groups than by lower ranking groups becomes further evident by the fact that only one student of group I and none of group II obtained a B average grade and only 27 students, or one-sixth, of the 167 who obtained B average grades belonged to the five lowest groups. On the other hand, 51 students of group X, or 30 per cent of all making this average, obtained B average grades. Over 50 per cent of all B averages were obtained by the students of the two highest groups.

The apparently creditable showing made by the lower groups for this period is, of course, to be explained by the fact that the less successful students withdrew before acquiring senior standing and only a very small proportion of all—those who were most successful academically—remained in attendance.

PREDICTING ACADEMIC SUCCESS.

Can academic success for students of a given group rank be predicted? If so, to what extent can this be done, and how reliable is such prediction?

From the data previously presented an attempt was made to predict how many chances in 100 a student of a given group has of obtaining an average of each of the grades used in the grading system of the Kansas State Teachers College of Emporia. These data are shown in Tables XXXVII to XLI for various periods of college attendance.

From Table XXXVII it will be seen that a group I student during his first semester in college, out of 100 chances has, statistically, no chance of making an average grade of A, 2.9 chances of making an average grade of B, 32.4

TABLE XXXVII.—The chances in 100 that a student of a given group has of obtaining an average grade of A, B, C, D or F for the first semester.

Group.	Grades.					Total number of students.
	A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I.....................	....	2.9	32.4	47.5	17.2	238
II.....................	....	5.6	44.2	41.2	9.0	267
III.....................	....	9.8	55.1	27.4	7.7	285
IV.....................	.7	10.6	56.6	25.2	6.9	274
V.....................	....	16.0	58.7	21.2	4.1	293
VI.....................	.4	21.2	55.8	18.7	3.9	283
VII.....................	....	29.9	54.2	12.5	3.4	264
VIII.....................	1.9	32.2	53.4	11.0	1.5	264
IX.....................	5.3	41.3	44.5	7.8	1.1	281
X.....................	10.7	59.0	24.7	4.4	1.1	271
Totals..............	1.9	23.0	48.3	21.4	5.4	2,720

Read table thus: For the first semester in college, of 100 chances, a student of group I has no chance of making an average grade of A, 2.9 chances of making an average grade of B, 32.4 chances of making an average grade of C.

chances of making an average grade of C, 47.5 chances of making a D average, and 17.2 chances of making an F average. For each of the succeeding higher groups the chances of making high average grades are somewhat better, and of making low average grades the chances are somewhat less probable. Thus, with group X, the condition pertaining to group I is practically reversed. Students of this group have 10.7 chances in 100 of making an average grade of A; 59.0 of making an average grade of B; 24.7 of making an average grade of C; only 4.4 chances of making an average grade of D; and 1.1 chances of making an F average.

The data shown in Table XXXVIII present the chances in 100 that students of each group have of making each average grade for the freshman year. The students who remain in college for the entire freshman year have fewer chances in 100 of making an average grade of F than is the case during the first semester. On the other hand, such students have no chance, statistically, of making an average of A, and only 2.4 chances in 100 of making a B average. Moreover, their chances of making a D average grade are 53.6 in 100. Students of the higher groups have much the same chances of making each average grade for the whole freshman year as for the first semester only. For example, the group X student has 70 chances in 100 of making an A or B average for the year, to the group I student's 2.4 chances of making an average grade of B. Again, the group I student has 56 chances of making a D or F average grade to the group X student's 1.6 chances of making a D or F average grade.

By referring to Table XXXIX it will be seen that in the sophomore year students of group I have, statistically, no chance in 100 of making A or B

TABLE XXXVIII.—The chances in 100 that a student of a given group has of obtaining an average grade of A, B, C, D or F for the freshman year.

Group.	Grades.					Total number of students.
	A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I......................	....	2.4	42.2	53.6	1.8	168
II.....................	....	5.8	58.2	35.6	.5	191
III....................	....	11.3	60.5	27.0	1.3	230
IV....................	.5	15.1	64.3	18.8	1.4	218
V.....................	....	19.8	62.8	16.6	.8	253
VI....................	....	24.1	62.0	13.5	.4	245
VII...................	.4	31.5	58.7	9.4	....	235
VIII..................	.8	40.4	49.8	9.0	....	245
IX....................	2.4	46.2	43.8	7.5	....	253
X.....................	9.8	60.4	28.2	1.6	....	255
Totals..............	1.5	27.3	53.0	17.6	.6	2,293

Read table thus: For the freshman year in college, of 100 chances, a student of group I has no chance of making an average grade of A, 2.4 chances of making an average grade of B, 42.2 chances of making an average grade of C.

TABLE XXXIX.—The chances in 100 that a student of a given group has of obtaining an average grade of
A, B, C, D or F for the sophomore year.

Group.	Grades.					Total number of students.
	A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I.....................	....	....	42.6	51.0	4.3	47
II.....................	....	3.2	56.5	40.4	....	62
III....................	1.7	8.5	76.3	11.9	1.7	59
IV.....................	....	17.6	70.2	10.6	1.8	57
V......................	4.1	17.6	62.2	16.3	....	74
VI.....................	....	30.5	54.2	13.6	1.7	59
VII....................	....	30.4	63.1	5.5	1.1	92
VIII...................	....	38.0	53.3	7.6	1.1	92
IX....................	2.0	47.1	46.0	5.0	1.0	103
X.....................	9.0	63.0	21.0	6.0	1.0	100
Totals..............	2.0	29.8	52.6	14.2	1.2	745

Read table thus: For the second year in college, of 100 chances, a student of group I has no chance of making
an average grade of A, no chance of making an average grade of B, 42.6 chances of making an average grade of C.

average grades and 55 chances of making D or F average grades. On the
other hand, students of group X have 72 chances of making A or B average
grades against 7 chances of making D or F average grades.

For those who persist in attendance for both the freshman and sophomore
years it will be seen from Table XL that only students of groups IX and X
have any chance in 100 of obtaining average grades of A for the two years.
Again students of group X have 75 chances in 100 of obtaining average grades
of A or B, and group IX students have 56 chances of obtaining these grades.
Students of the two lowest groups combined have 43 chances of obtaining D
average grades, while the students of the two highest groups combined have
only 4 chances in 100 of obtaining this average for the first two years of col-
lege.

Table XLI shows the chances in 100 that a student of a given group has
of making each average grade for the four years of college. The value of these
data is limited because of the inadequate number of cases available for making
a prediction based thereon reliable. This is particularly true in respect to the
lower groups. As was previously pointed out, few from these groups remained
in attendance to attain senior classification. Those who did remain undoubt-
edly were the ones who had, for various reasons, been academically more
successful than the others of equal group rank who were eliminated after va-
rious periods of persistence in attendance. Hence the chances for making
desirable grades by students of low groups appear more laudable than they
are in fact. Even without this consideration, however, it will be noted that
the higher groups have many more chances of making the more desirable
average grades than do those of the lower groups.

TABLE XL.—The chances in 100 that a student of a given group has of obtaining an average grade of A, B, C, D or F for the freshman and sophomore years.

Group.	Grades.					Total number of students.
	A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I.....................	....	....	45.9	54.0	....	37
II....................	....	6.1	61.2	32.7	....	49
III...................	....	12.5	75.1	12.4	....	48
IV....................	....	14.6	74.9	10.5	....	48
V.....................	....	20.0	65.0	15.0	....	60
VI....................	....	27.4	62.7	7.8	2.0	51
VII...................	....	34.6	58.0	7.4	....	81
VIII..................	....	37.4	59.0	3.6	....	83
IX....................	1.1	55.2	37.9	5.7	....	87
X.....................	10.1	65.1	22.4	2.2	....	89
Totals..............	1.6	32.7	53.5	12.0	.2	633

Read table thus: For the first and second years combined in college, of 100 chances, a student of group I has no chance of making an average grade of A, no chance of making an average grade of B, 45.9 chances of making an average grade of C.

TABLE XLI.—The chances in 100 that a student of a given group has of obtaining an average grade of A, B, C, D or F for the four years of college.

Group.	Grades.					Total number of students.
	A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I.....................	....	9.1	81.8	9.1	....	11
II....................	....	....	93.8	6.3	....	16
III...................	3.4	13.8	79.3	3.4	....	29
IV....................	....	43.5	56.5	....	....	23
V.....................	....	32.5	60.0	7.5	....	40
VI....................	....	37.0	62.9	....	....	27
VII...................	2.6	38.5	59.0	....	....	39
VIII..................	....	52.7	45.5	1.8	....	55
IX....................	3.8	64.2	32.1	....	....	53
X.....................	11.1	70.8	18.1	....	....	72
Totals..............	3.3	45.8	49.0	1.9	....	365

Read table thus: For the four years of college, of 100 chances, a student of group I has no chance of making an average grade of A, 9.1 chances of making an average grade of B, 81.8 chances of making an average grade of C.

From the data presented in this chapter it is observed that academic success may be predicted, within certain limits, from the student's rank on the entrance tests. Prediction based on the law of averages, however, is never perfect. It has certain limits within which it is operative. From the data shown it is evident, then, that academic success may be predicted, within certain limits, with the same degree of accuracy as is done in many other phases of life.

If it can be said to the student of group I that he has not one chance in 100 of making an A average, 3 chances of making a B average, 32 chances of making a C average, and so on, this is comparable to saying to a young man who contemplates entering upon a business career that out of 100 chances he has, statistically, no chance of becoming a millionaire, 3 chances of becoming wealthy, and 32 chances of meeting with moderate success, and so on. Thus, if a student knows in advance what his chances of success are, he is able to govern his conduct accordingly.

VARIOUS INTERCORRELATIONS.

For the four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927 various correlations were computed. The coefficients obtained are presented in Tables XLII to XLVII.

In Table XLII are shown the correlation values obtained between the scores the students made on various tests of which the entrance-test battery annually consisted. In this battery the Army Alpha Intelligence Scale and the Inglis Vocabulary Test were used each year; the Terman Group Intelligence Test in the years 1925 and 1927; the Psychological Examination by Thurstone in 1924 only; and the Barrett-Ryan English Test in each year, 1925 to 1927. Since the forms of the English test used in different years were not comparable, the scores from this test could not be used for purposes of a combined correlation for the three years.

The number of scores available for the correlations presented in Table XLII ranged from 336 to 2,605. The r's obtained in correlating the scores made on one test with those made on another test ranged from .53 to .88 for single classes, and from .72 to .84 for the combined scores of the four classes. The r's between group ranking and test scores ranged from .70 to .92 for single classes and from .85 to .89 for the combined scores of the four classes. All of these correlations are significant, and many of them are very high. These correlations indicate that the distributions secured by the various tests were in the main equivalent.

CORRELATIONS BETWEEN TEST SCORES AND HONOR POINTS.

In Table XLIII are shown the correlations which were computed between the scores the students made on the various tests and the honor points they earned during various periods of the first two years of college attendance. Honor points, as was previously explained, are computed from the total hours of passing grades a student obtained during a stated period. Both the value of the grades—A, B, C or D—and the total number of hours of these are involved.

These correlations, then, show the relative degree to which academic efficiency may be predicted by each of the several tests.

TABLE XLII.—Correlation coefficients between scores of students on various entrance tests.

Test scores correlated.	For students entering college in each year.				
	1924.	1925.	1926.	1927.	1924-1927 combined.
(1)	(2)	(3)	(4)	(5)	(6)
Army Alpha with Inglis Vocabulary	.74 ± .01	.75 ± .01	.71 ± .01	.71 ± .01	.72 ± .01
Army Alpha with Psychological Examination	.77 ± .02	....	....	....	....
Army Alpha with Terman Group	....	.88 ± .01	....	.81 ± .01	.84 ± .01
Army Alpha with English Test	....	.58 ± .02	.61 ± .01	.58 ± .02	....
Army Alpha with Group Ranking	.86 ± .01	.90 ± .01	.86 ± .01	.85 ± .01	.85 ± .01
Terman Group with Inglis Vocabulary	....	.80 ± .01	....	.77 ± .01	.78 ± .01
Terman Group with English Test	....	.58 ± .02	....	.59 ± .02	....
Terman Group with Group Ranking	....	.92 ± .00	....	.87 ± .01	.89 ± .00
Inglis Vocabulary with Psychological Examination	.75 ± .02	....	....	....	....
Inglis Vocabulary with English Test	....	.61 ± .02	.62 ± .02	.53 ± .02	....
Inglis Vocabulary with Group Ranking	.83 ± .01	.89 ± .01	.88 ± .01	.84 ± .01	.86 ± .00
English Test with Group Ranking	....	.71 ± .01	.79 ± .01	.70 ± .01	....
Group Ranking with Psychological Examination	.86 ± .01	....	....	....	....

Read table thus: Between the scores of the Army Alpha Intelligence Scale and the Inglis Vocabulary Test, r = .74 ± .01 for the class entering college in 1924; r = .71 ± .01 for the class entering in 1926 and for the one entering in 1927; and so on.

TABLE XLIII.—Correlation coefficients between scores students made on various entrance tests and honor points earned by them in college.

Test scores correlated with honor points.	Scholastic period for which earned honor points were correlated with test scores.	For students entering college in each year.				
		1924.	1925.	1926.	1927.	1924-1927 combined.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Army Alpha	First semester	.50 ± .02	.49 ± .02	.48 ± .02	.48 ± .02	.48 ± .01
Army Alpha	Second semester	.41 ± .02	.38 ± .03	.44 ± .02	.40 ± .03	.40 ± .01
Army Alpha	First year	.51 ± .02	.48 ± .03	.45 ± .02	.47 ± .03	.48 ± .01
Army Alpha	Second year	.36 ± .03	.40 ± .04	.47 ± .03	....	.41 ± .02
Army Alpha	First and second years	.57 ± .03	.46 ± .04	.49 ± .04	....	.51 ± .02
Psychological Examination	First semester	.54 ± .03	....	....	....	....
Psychological Examination	Second semester	.48 ± .03	....	....	....	....
Psychological Examination	First year	.56 ± .03	....	....	....	....
Psychological Examination	Second year	.48 ± .04	....	....	....	....
Psychological Examination	First and second years	.52 ± .04	....	....	....	....
Terman	First semester	....	.54 ± .02	....	.52 ± .02	....
Terman	Second semester	....	.41 ± .03	....	.46 ± .02	....
Terman	First year	....	.49 ± .03	....	.52 ± .02	.51 ± .02
Terman	Second year	....	.43 ± .04	....		
Terman	First and second years	....	.49 ± .04	....		
Inglis Vocabulary	First semester	.45 ± .02	.50 ± .02	.46 ± .02	.46 ± .02	.46 ± .01
Inglis Vocabulary	Second semester	.37 ± .02	.33 ± .03	.40 ± .03	.41 ± .03	.39 ± .01
Inglis Vocabulary	First year	.45 ± .02	.39 ± .03	.43 ± .02	.46 ± .03	.44 ± .01
Inglis Vocabulary	Second year	.46 ± .03	.45 ± .04	.39 ± .04	....	.44 ± .02
Inglis Vocabulary	First and second years	.57 ± .03	.45 ± .04	.47 ± .04	....	.49 ± .02
English	First semester	....	.55 ± .02	.58 ± .02	.51 ± .02	....
English	Second semester	....	.42 ± .03	.51 ± .02	.40 ± .03	....
English	First year	....	.50 ± .03	.43 ± .02	.39 ± .03	....
English	Second year	....	.49 ± .04	.46 ± .03	....	....
English	First and second years	....	.54 ± .03	.54 ± .03	....	....

Read table thus: Between the scores of the Army Alpha Intelligence Scale and honor points earned the first semester, r = .50 ± .02 for the class entering college in 1924; r = .49 ± .02 for the class entering in 1925; and so on.

The number of cases available for these correlations ranged from 136 to 2,202. The r's ranged from .33 to .58 for students entering college in a single year and from .39 to .51 for those entering in the four years combined. Since all of these values are considerably more than four times their probable errors, they are significant. The scores of every one of the tests are, therefore, valuable criteria for predicting academic success as measured by honor points earned for the first two years of college. In comparing one test with another, in this respect, it will be seen that there is little choice between them. All are apparently of approximately equal predictive value, and none is of outstanding value.

CORRELATION BETWEEN GROUP RANKING AND HONOR POINTS AND BETWEEN GROUP RANKING AND AVERAGE GRADES.

In Table XLIV are presented the coefficients obtained in correlating students' group rankings with honor points earned, and in Table XLV those obtained in correlating group rankings with average grades obtained. The number of cases available for the data shown in Table XLIV ranged from 186 to 2,201, and for those shown in Table XLV from 22 to 2,723.

Since honor points earned and average grades obtained both are based upon the common factor of grades, it would naturally be expected that practically the same correlations would be obtained between each of these and group rankings. This was found to be the case to a large extent, but it did not follow in every case. Between group rankings and honor points the r's ranged from —.15 to .58 for single classes and from .36 to .55 for the four classes combined. Between group rankings and average grades the r's ranged from —.03 to .60 for single classes and from .23 to .54 for the four classes combined. In each case only one negative correlation was obtained. Both of these were too low to be significant. In each case a few of the positive coefficients, also, were too low to be significant. Most of them, however, were considerably more than four times their probable errors and, therefore, significant.

On the whole, the correlations between group rankings and either honor points or average grades were only slightly higher than those obtained between any one of the single test scores and honor points.

A comparative study of the values of the correlation coefficients, however, reveals that there was a positive relationship between the group rankings of students at the beginning of their first semester in college and the average grades made by these students in any subsequent semester. A higher correlation existed between group rankings and average grades made during one of the first four semesters than during the later semesters. Between group rankings and average grades the students obtained during the seventh and eighth semesters in college the correlation values were very low. Between group rankings and honor points, however, this difference was less pronounced. The students from the low-ranking groups on the entrance tests who persisted in attendance for four years apparently overcame the handicaps which prevented others of equally low rank from obtaining significant grades during the first several semesters in college. That there was less difference in the average grades which students of different group rankings obtained during the senior year than in the earlier years of college has previously been pointed out in this study. The data just presented verify the former conclusions.

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TABLE XLIV.—Correlation coefficients between group ranking of students on the entrance tests (groups I, II, III, ... X) and honor points earned in college.

Scholastic periods for which honor points were correlated with group rankings.	For students entering college in each year.				
	1924.	1925.	1926.	1927.	1924-1927 combined.
(1)	(2)	(3)	(4)	(5)	(6)
First semester	.44 ± .02	.56 ± .02	.58 ± .02	.56 ± .02	.55 ± .01
Second semester	.45 ± .02	.41 ± .03	.46 ± .02	.47 ± .02	.45 ± .01
Third semester	.41 ± .03	.41 ± .04	.46 ± .03	.43 ± .03	.45 ± .02
Fourth semester	.23 ± .04	.40 ± .04	.39 ± .03	.47 ± .04	.41 ± .02
Fifth semester	.23 ± .05	.30 ± .06	.42 ± .04	....	.36 ± .04
Sixth semester	.26 ± .05	.37 ± .06	.35 ± .05	....	.36 ± .04
Seventh semester	.25 ± .06	.05 ± .09	....	....	....
Eighth semester	.19 ± .06	.03 ± .09	....	....	....
First year	.48 ± .02	.51 ± .03	.45 ± .02	.53 ± .02	.48 ± .01
First three semesters	.54 ± .03	.53 ± .03	.56 ± .03	.52 ± .03	.51 ± .02
First two years	.47 ± .03	.55 ± .04	.56 ± .03	.51 ± .04	.53 ± .02
First five semesters	.53 ± .05	.42 ± .06	.52 ± .05	....	.45 ± .04
First three years	.56 ± .05	.29 ± .08	.47 ± .06	....	.42 ± .04
First seven semesters	.55 ± .06	.05 ± .12	....	....	....
Four years	.45 ± .08	.12 ± .13	....	....	....
Second year	.32 ± .04	.44 ± .04	.49 ± .03	.37 ± .04	.43 ± .02
Third year	.28 ± .05	.31 ± .06	.46 ± .04	....	.42 ± .04
Fourth year	.27 ± .06	.15 ± .10	....	....	....
Second and third years	.39 ± .06	.44 ± .06	.49 ± .05	....	.44 ± .04
Second, third and fourth years	.39 ± .08	.08 ± .13	....	....	....
Third and fourth years	.48 ± .06	.01 ± .12	....	....	....

Read table thus: Between the group ranking and the honor points students earned during the first semester, r = .44 ± .02 for the class entering college in 1924; r = .56 ± .02 for the class entering in 1925; and so on.

TABLE XLV.—Correlation coefficients between group ranking of students on the entrance tests (groups I, II, III, . . . X) and average grades obtained.

Scholastic periods for which average grades were correlated with group rankings.	For students entering college in each year.				
	1924.	1925.	1926.	1927.	1924-1927 combined.
(1)	(2)	(3)	(4)	(5)	(6)
First semester	.55 ± .02	.55 ± .02	.53 ± .02	.49 ± .02	.47 ± .01
Second semester	.46 ± .02	.42 ± .03	.49 ± .02	.37 ± .03	.44 ± .01
Third semester	.60 ± .02	.50 ± .03	39 ± .03	.44 ± .03	.49 ± .02
Fourth semester	.60 ± .03	.40 ± .04	.44 ± .03	.49 ± .04	.43 ± .02
Fifth semester	.37 ± .04	.27 ± .06	.41 ± .04	....	.37 ± .03
Sixth semester	.46 ± .04	.43 ± .05	.25 ± .06	....	.42 ± .03
Seventh semester	.35 ± .05	.14 ± .07	....	....	.28 ± .05
Eighth semester	.21 ± .06	.38 ± .08	....	....	.29 ± .05
First year	.55 ± .02	.48 ± .03	.54 ± .02	.51 ± .02	.51 ± .01
First three semesters	.60 ± .02	.53 ± .03	.56 ± .03	.54 ± .03	.54 ± .02
First two years	.56 ± .03	.40 ± .04	.57 ± .03	.48 ± .04	.46 ± .02
First five semesters	.35 ± .06	.40 ± .06	.54 ± .05	....	.50 ± .03
First three years	.57 ± .05	.32 ± .08	.56 ± .05	....	.49 ± .03
First seven semesters	.41 ± .08	.20 ± .11	....	....	.30 ± .07
Four years	.57 ± .07	.30 ± .13	....	....	.49 ± .06
Second year	.46 ± .03	.49 ± .04	.50 ± .03	.51 ± .04	.45 ± .02
Third year	.40 ± .05	.33 ± .07	.39 ± .05	....	.38 ± .03
Fourth year	.30 ± .07	.03 ± .10	....	....	.27 ± .05
Second and third years	.50 ± .05	.41 ± .06	.53 ± .05	....	.47 ± .04
Second, third and fourth years	.51 ± .07	.23 ± .12	....	....	.39 ± .07
Third and fourth years	.26 ± .08	.15 ± .12	....	....	.23 ± .03

Read table thus: Between group ranking and the average grades students obtained, for the first semester, r = .55 ± .02 for the class entering college in 1924; r = .55 ± .02 for the class entering in 1925; and so on.

CORRELATION BETWEEN HONOR POINTS EARNED FOR VARIOUS PERIODS AND BETWEEN AVERAGE GRADES OBTAINED FOR VARIOUS PERIODS.

In Table XLVI are shown the coefficients obtained in correlating the number of honor points earned during one period of college attendance with the number earned during some other period of attendance. In Table XLVII are shown similar correlations between average grades obtained during various periods. For the data shown in the former table the number of cases ranged from 148 to 2,190 and for the latter from 67 to 2,310.

The r's between honor points and honor points ranged from .43 to .94 for single classes and from .68 to .91 for the four classes combined. The r's between average grades and average grades ranged from .42 to .97 for single classes and from .52 to .90 for the four classes combined.

It will be noted that a marked similarity exists between the correlation values presented in these two tables. There is apparently little choice as to which of these criteria possesses the greater value for predicting later academic success.

It will be observed that these correlation values are as a whole much larger than the correlation values between group ranking and average grades made or between test scores and average grades or honor points. Nearly every one is a very good correlation. All of the coefficients are significant, that is, greater than four times the size of the probable error. Many of them are high, and a few are very high. These correlations are, in fact, quite a contrast to those obtained between group ranking and average grades. It will be noted that according to these data the average grades which students obtain for the freshman year are as valuable an index of the average grades they will obtain during the senior year as the group rankings at the time of college entrance are of the average grades they will obtain during the first semester in college. The average grades that students obtain during the freshman year are a very excellent indication of the average grades they will obtain during the second year, the third year, and even the fourth year of college. All of the intercorrelations between the average grades of any one year with those of any other year were high, as were also those between honor points and honor points. For the four classes combined the correlations between the average grades for any one period of time with the average grades for any subsequent period of time were high, and for this group the correlations between the average grades for an accumulated period with the average grades for this period plus one or more years were very high.

For purposes of predicting academic success, grades obtained in previous periods of college attendance are a much more valuable criterion for predicting future academic success than test scores from a single test alone or from a battery of tests. This is a significant factor in guidance and counseling programs. By use of the tests the students likely to need special guidance may be discovered prior to college entry, but such direction should not be too specific until the student has been in college attendance at least one semester. By use of test results and average grades obtained, a valuable predictive criterion is established.

TABLE XLVI.—Correlation coefficients between honor points earned by students for one scholastic period and honor points earned by them for another scholastic period.

Scholastic periods for which honor points were correlated.	For students entering college in each year.				
	1924.	1925.	1926.	1927.	1924-1927 combined.
(1)	(2)	(3)	(4)	(5)	(6)
First semester with second semester	.68 ± .02	.70 ± .02	.74 ± .01	.71 ± .02	.70 ± .01
First two semesters with third semester	.48 ± .03	.78 ± .02	.72 ± .02	.48 ± .03	.72 ± .01
First three semesters with fourth semester	.47 ± .03	.88 ± .01	.74 ± .02	.71 ± .03	.76 ± .01
First four semesters with fifth semester	.51 ± .05	.70 ± .04	.62 ± .04	....	.68 ± .03
First five semesters with sixth semester	.50 ± .05	.79 ± .03	.82 ± .02	....	.79 ± .02
First six semesters with seventh semester	.47 ± .07	.64 ± .07	....	....	....
First seven semesters with eighth semester	.60 ± .06	.59 ± .09	....	....	....
First year with second year	.69 ± .02	.77 ± .02	.77 ± .02	.73 ± .03	.74 ± .01
First year with third year	.45 ± .05	.60 ± .05	.76 ± .03	....	.71 ± .03
First year with fourth year	.43 ± .06	.60 ± .07	....	....	....
Second year with third year	.49 ± .05	.79 ± .03	.88 ± .04	....	.68 ± .03
Second year with fourth year	.56 ± .06	.60 ± .07	....	....	....
Third year with fourth year	.57 ± .06	.50 ± .09	....	....	....
First year with first two years	.88 ± .01	.93 ± .01	.91 ± .01	.84 ± .01	.91 ± .00
First year with second and third years	.59 ± .05	.75 ± .04	.77 ± .03	....	.77 ± .02
First year with second, third and fourth years	.60 ± .07	.72 ± .07	....	....	....
First two years with third year	.49 ± .06	.74 ± .04	.66 ± .05	....	.72 ± .03
First two years with fourth year	.52 ± .06	.57 ± .08	....	....	....
First two years with first three years	.91 ± .01	.93 ± .01	.87 ± .02	....	.89 ± .01
First two years with third and fourth years	.62 ± .06	.80 ± .05	....	....	....
First three years with fourth year	.61 ± .06	.64 ± .08	....	....	....
First three years with four years	.85 ± .03	.94 ± .02	....	....	....

Read table thus: Between honor points students earned the first semester and the second semester r = .68 ± .02 for the class entering college in 1924; r = .70 ± .02 for the class entering in 1925; and so on.

TABLE XLVII.—Correlation coefficients between average grades obtained by students for one scholastic period and average grades obtained by them for another scholastic period.

Scholastic periods for which average grades were correlated.	For students entering college in each year.				
	1924.	1925.	1926.	1927.	1924-1927 combined.
(1)	(2)	(3)	(4)	(5)	(6)
First semester with second semester	.62 ± .02	.65 ± .02	.69 ± .02	.65 ± .02	.62 ± .01
First two semesters with third semester	.54 ± .03	.74 ± .02	.71 ± .02	.58 ± .03	.70 ± .01
First three semesters with fourth semester	.64 ± .03	.75 ± .02	.73 ± .02	.74 ± .02	.74 ± .01
First four semesters with fifth semester	.69 ± .03	.70 ± .04	.68 ± .04	....	.69 ± .02
First five semesters with sixth semester	.64 ± .04	.75 ± .04	.78 ± .03	....	.65 ± .03
First six semesters with seventh semester	.57 ± .06	.65 ± .07	....	....	.60 ± .05
First seven semesters with eighth semester	.61 ± .06	.58 ± .09	....	....	.64 ± .05
First year with second year	.63 ± .03	.81 ± .02	.75 ± .02	.74 ± .02	.73 ± .01
First year with third year	.64 ± .04	.58 ± .05	.67 ± .04	....	.63 ± .02
First year with fourth year	.55 ± .05	.53 ± .07	....	....	.52 ± .04
Second year with third year	.42 ± .06	.75 ± .04	.71 ± .03	....	.65 ± .02
Second year with fourth year	.66 ± .05	.61 ± .07	....	....	.81 ± .02
Third year with fourth year	.61 ± .05	.55 ± .08	....	....	.74 ± .03
First year with first two years	.86 ± .01	.93 ± .01	.91 ± .01	.73 ± .02	.86 ± .01
First year with second and third years	.46 ± .05	.72 ± .04	.75 ± .03	....	.76 ± .02
First year with second, third and fourth years	.67 ± .06	.74 ± .06	....	....	.68 ± .04
First two years with third year	.64 ± .04	.80 ± .03	.79 ± .03	....	.76 ± .02
First two years with fourth year	.57 ± .06	.65 ± .07	....	....	.53 ± .05
First two years with first three years	.88 ± .02	.94 ± .01	.87 ± .02	....	.90 ± .01
First two years with third and fourth years	.48 ± .07	.86 ± .04	....	....	.61 ± .05
First three years with fourth year	.77 ± .03	.54 ± .10	....	....	.66 ± .05
First three years with four years	.82 ± .03	.97 ± .01	....	....	.88 ± .02

Read table thus: Between the average grades obtained the first semester and the second semester, r = 62 ± .02 for the class entering college in 1924; .65 ± .02 for the class entering in 1925; and so on.

SUMMARY.

1. The academic records of 2,765 students were studied for the first semester in college, and, for as many of these as persisted in attendance, for the four years of college. A high degree of relationship between academic success and group ranking on entrance tests was found to exist.

2. Students of the lower groups registered for fewer hours, secured withdrawal and incomplete marks on more hours, and failed in more hours than students of the higher groups during the first semester in college.

3. During the first semester only 17.8 per cent of the students of the lowest group met certification requirements; that is, three-fourths of the grades obtained were C or better. More than 50 per cent of the students from each of the six highest groups, and 87.3 per cent from group X, met these requirements.

4. In the second semester of the freshman year the various averages for the lower groups were only slightly better than for the first semester. For the higher groups they were similar to those of the first semester.

5. The sophomore and junior years witnessed small changes in the academic success of the students of the various groups.

6. The senior year found the academic success of the students of the several groups more nearly on a par. The higher groups had somewhat lower averages than in preceding years, while the lower groups had higher ones. The per cent meeting certification requirements from the highest groups still was more than twice as large as the per cent meeting these requirements from group I.

7. For the four years of college, the various data were much the same as for single years or single semesters. Only 25 per cent of the students of group I met certification requirements. The per cent meeting these requirements from the three highest groups was more than three times as great.

8. Students of low groups on the entrance tests ranked low in efficiency in respect to average hours failed per semester, per cent of hours passed of those carried to completion, per cent of hours passed of a normal load of fifteen hours, and per cent meeting certification requirements.

9. A few individuals obtained high average grades from each group, but more from the higher groups obtained such grades, and the highest averages were obtained chiefly by the students from the highest groups.

10. Low average grades were obtained by students from each group, but students of the lower groups obtained proportionally many more of these than the students of the higher groups.

11. Significant correlation coefficients were obtained between scores on entrance tests and academic success as measured by average grades or honor points; between group ranking and academic success; between average grades for one period of time and average grades for another period of time; and between honor points for various periods of time. The two latter groups of correlation values, however, were, on the whole, much higher than those of the former groups.

CHAPTER V.

ACADEMIC SUCCESS IN DIFFERENT COLLEGE DEPARTMENTS IN RELATION TO GROUP RANK.

Many opinions have been expressed in regard to the relationship between a student's rank on entrance tests and his chances of meeting with success in different college departments. One popular theory is that although there may be a close relationship between entrance-test rank and success in the purely academic subjects, such as English, mathematics, psychology, history, and the like, there is little if any relationship between entrance-test rank and success in the so-called nonacademic or semiacademic subjects, such as home economics, manual arts, music, commerce, agriculture, and others of a similar type. Another theory regarding this matter is that in the nonacademic departments the students who rank low on the entrance tests not only equal but actually surpass in success those who rank high on these tests.

A thorough study was made of the academic success of the students of each group, as determined by the entrance tests, in each of the departments of the Kansas State Teachers College of Emporia. The group of students whose academic records was studied included all the freshmen who entered college in the four years, 1924 to 1927. All the grades these students obtained during the time of their attendance up to June, 1928, were included in this study.

In making this study the records of 36,500 student courses and 94,616 semester hours were involved. Over 3,000 separate statistical tables were prepared. Since space permits the showing of only a limited amount of these data, in this report, a few representatives tables were carefully selected for this purpose.

AVERAGE GRADE OF EACH GROUP IN EACH DEPARTMENT FOR THE FIRST SEMESTER IN COLLEGE.

Table XLVIII shows the average grade index which the students of each group obtained in each department of the College for the first semester of the freshman year. It will be observed that for group I the average grade index range was from 2.64 (C+) in the manual arts department to 4.32 (D—) in the English department. The latter was the largest grade index obtained by any group in any department. For group X the average grade index range was from 1.75 (B+) in the geography department to 2.75 (C+) in the manual arts department. The former of these was the smallest grade index obtained by any group in any department. The grade indices for all groups in all departments for this semester lie between the two extremes of 4.32 and 1.75.

In fewer than one-third of all the departments the students of group I obtained an average grade index less than 3.50, or above a D average grade. Three of the seven departments in which the students of this group made average grades of C were of the academic type and four of the nonacademic or semiacademic type. Among the departments in which these students made

TABLE XLVIII.—The average grade index for the students of each group in each department for the first semester of the freshman year.

(For four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Department.	Groups.										All students.	Total number of hours.	Number courses.
	I	II	III	IV	V	VI	VII	VIII	IX	X			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Agriculture	3.39	3.11	2.82	2.40	2.73	2.60	2.55	2.47	2.82	2.20	2.79	282	138
Art	3.66	2.88	2.92	3.23	2.82	3.00	2.75	2.54	2.41	2.17	2.81	1,794	525
Biology and Geology	2.91	3.33	2.89	2.71	2.98	2.70	2.24	2.28	2.46	2.27	2.66	1,160	424
Chemistry	3.50	3.75	3.33	3.49	3.54	3.00	3.15	2.80	2.72	2.00	2.83	562	115
Commerce	3.94	3.65	3.36	3.24	3.03	3.01	2.83	2.67	2.49	2.03	2.98	2,196	719
English	4.32	4.16	3.90	3.68	3.59	3.53	3.14	2.79	2.63	2.24	3.24	4,238	1,844
Education	4.13	3.66	3.37	3.13	3.37	2.95	2.84	2.61	2.38	2.14	3.12	2,410	852
Freshman Survey*	3.77	3.67	3.52	3.26	3.18	2.89	2.93	2.78	2.62	2.30	3.11	2,698	1,349
Geography	4.11	3.66	3.57	3.11	3.04	2.87	3.37	2.97	2.85	1.75	3.07	982	324
Health	3.18	3.00	3.09	2.58	2.61	2.62	2.54	2.14	2.27	1.80	2.65	1,653	600
History	3.05	3.93	3.75	3.50	3.26	3.42	2.89	2.89	2.73	2.45	3.06	1,075	354
Home Economics	3.65	3.17	2.72	2.97	2.35	1.90	2.79	2.19	2.56	2.16	2.64	235	98
Latin	2.64	4.00	3.00	2.64	3.00	2.73	2.41	2.59	2.90	2.54	2.70	205	64
Manual Arts	4.02	2.85	2.67	3.40	2.69	2.07	3.00	3.11	2.34	2.75	2.75	318	94
Mathematics	4.30	3.50	3.36	3.24	2.84	3.05	2.53	2.44	2.02	1.85	2.79	1,282	357
Modern Languages		3.90	3.41	3.84	3.53	3.33	2.65	2.88	2.53	2.06	2.84	963	215
Music	3.12	2.70	2.60	2.79	2.42	2.67	2.37	2.26	2.24	2.18	2.46	1,488	999
Physical Education	2.85	2.86	2.60	2.95	2.94	2.70	1.84	3.03	2.97	2.06	2.74	332	167
Physics	3.90	4.00	2.56	2.61	2.51	2.89	2.64	2.15	2.65	2.31	2.82	215	64
Psychology	3.98	3.71	3.29	3.26	3.25	2.94	2.81	2.68	2.47	2.11	3.10	4,271	1,441
Speech	4.02	3.35	3.40	3.36	3.17	3.00	2.94	2.82	2.66	2.55	2.97	1,515	755
Sociology and Economics	3.90	3.80	3.00	3.57	3.13	2.63	2.87	2.85	2.73	2.14	3.06	517	175
Totals	3.80	3.50	3.31	3.24	3.09	3.02	2.81	2.69	2.54	2.19	2.97	30,391	11,673

Read table thus: In agriculture the grade index of group I was 3.39; of group II, 3.11; of group III, 2.82; and so on.
Interpret the grade index thus: 1.00 to 1.49, A; 1.50 to 2.49, B; 2.50 to 3.49, C; 3.50 to 4.49, D; 4.50 to 5.00, F.
* Freshman survey is listed as an independent department in this and the following several tables because it was a part of several different departments during the time covered by this study.

average grades below C, however, were four of the nonacademic type. By
comparing the data of column 2 with those of column 12 it will be seen that
in only two departments, manual arts and history, was the average grade ob-
tained by this group higher than the average of all students for the ten groups
combined. The comparatively high grade index for this group in the de-
partment of history undoubtedly was due largely to few cases from this group
taking courses in that department during the first semester.

In all the departments, however, in which the students of this group made
fairly high average grades, except manual arts and physical education, it
will be seen that the grade index of the group was materially higher than
the average grade index for the department for all groups combined. In agri-
culture, for example, it will be seen that the grade index of each succeeding
higher group was lower, with only two exceptions. In the department of com-
merce there was no exception, in speech there was only one exception, and
in a number of other departments there were also only several exceptions.

With most of the so-called academic subjects there was a definite trend for
the grade index to become smaller for each higher group. In other words, each
succeeding higher group tended to obtain a higher average grade than preced-
ing lower groups.

During the first semester, then, it was true in only a few departments that
students of the lower groups were academically as successful as those of the
higher groups. In no department, however, did those of the lower groups
appreciably surpass those of the higher groups.

It should also be noted that the average grade index for all groups for
different departments varied considerably. They ranged from 2.46 (B—) of
the music department to 3.24 (C—) of the English department. Obviously
standards in grading of different departments are a contributing factor in
making students of lower groups appear more successful in some departments
than in others. Then again it may be easier to be actually successful in some
departments than in others. For all departments in which the students of the
lower groups obtained comparatively high average grades, however, the aver-
age grade index for the department was considerably lower than the average
for the school, which for the first semester was 2.97.

In Table XLIX the grade index of each group for each department for the
four years of college is shown. Since the data shown in this table cover eight
times as much of student time and consequently many more student hours
of work, they are obviously more reliable than those of Table XLVIII. From
this table it will be seen that over the four-year period, in every department,
including music, home economics, physical education, and manual arts, there
was a distinct trend for higher groups to obtain higher average grades. In
the case of the so-called academic departments, such as English, psychology,
and mathematics, this tendency was very marked. It was, however, scarcely
less marked in the nonacademic departments of commerce, agriculture, speech,
and home economics. In no department did the students of the lower groups
equal or surpass those of the highest groups. For the four years, students of
group I obtained average grades above D only in the departments of biology
and geology, health, home economics, manual arts, music, and physical edu-
cation. They did not obtain average grades above D in such other non-
academic departments as agriculture, art, commerce, and speech.

TABLE XLIX.—The average grade index for the students of each group in each department for the four years of college.

(For four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Department.	Groups.										All students.	Total number of hours.	Number courses.
	I	II	III	IV	V	VI	VII	VIII	IX	X			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Agriculture.................	3.52	3.02	2.91	2.80	2.84	2.70	2.46	2.64	2.30	2.17	2.81	1,062	481
Art........................	3.62	2.83	2.91	2.91	2.82	2.96	2.51	2.36	2.32	2.17	2.68	4,387	1,409
Biology and Geology...........	3.06	3.10	2.79	2.56	2.65	2.69	2.47	2.49	2.40	2.14	2.65	4,124	1,310
Chemistry..................	3.60	3.59	2.92	2.99	3.15	3.05	2.97	3.09	2.32	2.09	2.92	1,551	330
Commerce..................	3.54	3.47	3.26	3.09	2.96	2.92	2.72	2.48	2.50	2.12	2.87	5,836	2,007
English....................	4.22	3.86	3.82	3.48	3.43	3.26	3.11	2.80	2.70	2.30	3.14	13,299	5,541
Education..................	3.77	3.36	3.12	2.95	3.05	2.87	2.82	2.77	2.52	2.34	2.96	11,400	3,924
Freshman Survey..............	3.81	3.60	3.37	3.18	3.17	2.97	2.84	2.78	2.87	2.24	3.11	4,518	2,259
Geography..................	3.78	3.53	3.27	3.03	3.07	2.80	3.13	2.96	2.68	2.05	2.96	2,728	902
Health.....................	3.15	2.91	2.81	2.67	2.64	2.64	2.47	2.28	2.36	1.84	2.64	5,381	2,026
History....................	3.82	3.85	3.67	3.29	3.07	3.25	2.98	2.85	2.55	2.32	2.94	3,323	1,141
Home Economics..............	3.32	2.75	2.71	2.82	2.88	2.16	2.80	2.45	2.41	2.16	2.61	1,301	468
Latin......................	....	3.68	2.92	2.91	3.40	2.66	2.83	2.60	2.35	2.12	2.58	942	287
Manual Arts.................	2.80	2.76	2.60	2.95	2.34	1.97	2.47	2.86	2.45	2.04	2.52	1,409	432
Mathematics................	3.81	3.59	3.28	2.99	3.14	2.88	2.63	2.31	2.14	2.02	2.79	3,218	961
Modern Languages............	4.21	3.89	3.36	3.63	3.37	3.00	2.93	2.74	2.66	2.10	2.88	3,790	897
Music......................	3.01	2.79	2.66	2.56	2.42	2.51	2.36	2.46	2.38	2.16	2.52	5,642	3,707
Physical Education............	2.84	2.76	2.40	2.62	2.53	2.69	2.29	2.38	2.33	2.06	2.53	1,505	729
Physics....................	3.64	3.54	2.71	2.61	2.63	3.28	2.24	2.15	2.50	1.90	2.70	828	251
Psychology.................	3.92	3.57	3.30	3.13	3.14	2.89	2.88	2.75	2.54	2.15	2.97	9,950	3,546
Speech.....................	3.72	3.38	3.22	3.03	3.09	2.90	2.81	2.64	2.72	2.55	2.95	5,121	2,757
Sociology and Economics.......	3.66	3.43	3.09	3.29	2.89	2.75	2.79	2.83	2.48	2.30	2.96	3,301	1,125
Totals..................	3.66	3.35	3.16	3.07	2.96	2.91	2.81	2.64	2.52	2.16	2.88	94,616	36,500

Read table thus: In agriculture the grade index of group I was 3.52; of group II, 3.02; of group III, 2.91; and so on.
Interpret the grade index thus: 1.00 to 1.49, A; 1.50 to 2.49, B; 2.50 to 3.49, C; 3.50 to 4.49, D; 4.50 to 5.00, F.

On the other hand, students of group X for the four years made average grades of B in every department on the campus except speech. Moreover, students of group IX made average grades of B in over half of the departments, and those of groups VII and VIII in one-third or more of the departments, including both academic and nonacademic departments. Below group VII, however, out of 131 chances, only a total of five average grades of B were obtained.

PER CENT OF EACH GRADE OBTAINED BY GROUPS IN EACH COLLEGE DEPARTMENT.

To show in greater detail the differences in academic success that students of the ten group ranks obtained in the various college departments, four tables were constructed of the percentage distribution of grades that each group obtained in each department of the college. In Table L are shown the per cent of A, B, C, D and F grades that students of each group, I to X, obtained during the freshman year in each department. The same data for the sophomore year are shown in Table LI; for the junior and senior years combined in Table LII; and for the four years of college combined in Table LIII.

A careful study of each of these four tables reveals that in nearly every department there was a marked difference in the distribution of the percentage of different grades obtained by the students of low-ranking groups and high-ranking groups. These differences were more pronounced for the freshman year of college (data shown in Table L) and for the four years of college combined (data shown in Table LIII) than for the sophomore year or the junior and senior years.

In comparing the per cent of A grades and the per cent of F grades which were obtained in any department, it will be noted that higher groups secured a far greater proportion of the former grade than lower groups and a smaller proportion of the latter. This statement is equally true for most departments when applied to a comparison of B and D grades. The department of manual

TABLE L.—The per cent of each grade obtained by the students of each group in each department of the college during the freshman year.

(For four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Agriculture..............................	I	....	3	57	32	8	65
	II	13	6	46	28	7	85
	III	7	31	45	12	5	117
	IV	8	36	39	5	12	85
	V	6	26	53	6	9	53
	VI	3	54	38	5	....	78
	VII	24	36	31	4	5	78
	VIII	11	49	35	5	....	55
	IX	23	25	48	....	4	44
	X	15	55	30	....	....	27
Art..	I	....	10	37	32	21	241
	II	7	22	52	10	9	244
	III	8	34	36	11	11	318
	IV	6	27	38	17	12	449
	V	7	29	48	11	5	370
	VI	5	24	47	15	9	297
	VII	14	27	47	6	6	343
	VIII	13	46	33	6	2	332
	IX	15	38	38	6	3	263
	X	27	31	34	5	3	342
Biology and Geology......................	I	2	18	60	12	8	247
	II	4	24	46	14	12	263
	III	7	29	49	7	8	346
	IV	7	39	42	9	3	295
	V	8	40	37	11	4	291
	VI	6	36	49	2	7	260
	VII	11	49	30	3	7	209
	VIII	16	43	40	1	....	200
	IX	17	42	35	2	4	195
	X	16	57	19	4	4	136
Chemistry................................	I	....	....	64	9	27	55
	II	....	4	44	26	26	115
	III	10	10	38	33	9	105
	IV	11	17	34	13	25	133
	V	....	....	60	33	7	75
	VI	8	24	44	12	12	124
	VII	11	22	36	9	22	90
	VIII	6	25	51	12	6	81
	IX	13	39	36	6	6	78
	X	36	36	14	9	5	110
Commerce................................	I	2	12	34	19	33	284
	II	2	11	40	31	16	398
	III	2	18	41	23	16	342
	IV	5	22	45	13	15	400
	V	6	26	49	13	6	455
	VI	13	29	33	12	13	407
	VII	14	24	45	7	10	428
	VIII	19	35	27	15	4	551
	IX	17	34	38	8	3	418
	X	29	39	27	4	1	328
English..................................	I	....	2	25	26	47	442
	II	....	2	40	25	33	722
	III	....	4	41	25	30	858
	IV	1	6	49	25	19	884
	V	1	10	52	23	14	917
	VI	2	15	53	19	11	913
	VII	1	20	58	13	8	981
	VIII	6	30	50	9	5	1,023
	IX	9	35	46	5	5	1,039
	X	22	44	29	3	2	1,121

TABLE L—CONTINUED.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education..............................	I	....	3	34	36	27	539
	II	2	9	46	27	16	519
	III	....	19	50	24	7	601
	IV	3	20	53	16	8	783
	V	4	18	51	21	6	666
	VI	2	27	53	14	4	598
	VII	4	31	51	12	2	603
	VIII	5	37	51	4	3	565
	IX	13	42	39	6	....	613
	X	17	49	29	3	2	513
Freshman Survey	I	1	3	35	38	23	408
	II	....	9	42	31	18	438
	III	....	12	50	25	13	460
	IV	1	15	53	21	10	480
	V	5	12	54	19	10	442
	VI	3	20	62	11	4	443
	VII	6	21	59	9	5	420
	VIII	10	25	48	11	6	434
	IX	11	35	41	12	1	408
	X	22	38	35	3	2	408
Goegraphy..............................	I	....	4	40	30	26	99
	II	....	14	42	23	21	176
	III	....	16	37	35	12	203
	IV	2	22	51	18	7	248
	V	7	19	43	20	11	194
	VI	....	29	55	16	....	213
	VII	4	13	57	16	10	202
	VIII	3	21	55	17	4	173
	IX	3	40	40	12	5	203
	X	29	41	25	3	2	175
Health................................	I	4	15	54	16	11	351
	II	3	25	52	9	11	474
	III	7	35	37	13	8	448
	IV	12	26	49	8	5	385
	V	14	31	36	14	5	444
	VI	10	34	42	8	6	379
	VII	13	39	38	6	4	319
	VIII	21	37	38	4	....	231
	IX	20	37	34	6	3	300
	X	45	39	13	2	1	213
History and Government.................	I	....	18	43	14	25	63
	II	....	15	19	22	44	131
	III	....	6	31	33	30	140
	IV	2	16	43	23	16	150
	V	3	20	53	18	6	184
	VI	3	10	48	26	13	201
	VII	7	21	50	18	4	258
	VIII	9	34	36	10	11	265
	IX	11	35	41	9	4	282
	X	15	40	32	12	1	341
Home Economics.......................	I	....	11	30	28	31	54
	II	4	33	34	20	9	54
	III	....	24	35	26	15	34
	IV	7	19	55	19	....	78
	V	10	27	44	19	....	48
	VI	9	55	36	....	....	47
	VII	10	15	34	28	13	60
	VIII	16	39	39	4	2	109
	IX	15	39	35	8	3	72
	X	16	55	20	9	....	45

TABLE L—Continued.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Latin	I	....	....	....	....	....	....
	II	....	25	....	75	....	20
	III	....	27	62	11	....	45
	IV	17	33	33	17	....	30
	V	....	38	62	....	....	13
	VI	14	40	31	15	....	55
	VII	5	43	34	18	....	56
	VIII	17	31	35	17	....	29
	IX	26	32	9	14	19	80
	X	23	33	36	2	6	124
Manual Arts	I	8	15	65	6	6	102
	II	8	18	65	6	3	94
	III	4	36	47	6	7	96
	IV	6	14	53	20	7	95
	V	9	44	37	8	2	126
	VI	22	49	29	....	....	68
	VII	....	21	79	....	....	33
	VIII	....	26	64	4	6	47
	IX	26	26	48	....	....	27
	X	....	59	41	....	....	29
Mathematics	I	3	2	34	34	27	150
	II	2	2	58	17	21	192
	III	6	15	35	29	15	277
	IV	6	24	44	15	11	241
	V	3	26	50	9	12	241
	VI	9	28	41	11	11	259
	VII	17	27	42	7	7	289
	VIII	20	33	40	5	2	229
	IX	33	33	25	5	4	259
	X	43	31	20	2	4	250
Modern Language	I	....	....	23	9	68	44
	II	....	....	31	46	23	65
	III	....	6	53	23	18	85
	IV	....	16	45	26	13	77
	V	....	21	36	19	24	120
	VI	6	21	36	18	19	215
	VII	7	35	33	15	10	208
	VIII	11	34	29	13	13	326
	IX	5	46	33	12	4	326
	X	33	36	22	6	3	449
Music	I	7	37	33	6	17	161
	II	6	39	38	12	5	282
	III	7	46	37	7	3	229
	IV	9	38	32	10	11	255
	V	13	47	30	6	4	332
	VI	15	35	33	10	7	327
	VII	17	49	27	2	5	400
	VIII	15	51	24	7	3	323
	IX	18	44	29	5	4	465
	X	28	40	25	4	3	379
Physical Education	I	7	34	30	21	8	67
	II	3	32	45	5	15	78
	III	16	37	28	16	3	75
	IV	17	40	31	6	6	35
	V	23	21	26	13	17	53
	VI	4	30	54	6	6	50
	VII	26	26	48	....	....	38
	VIII	14	27	51	3	5	37
	IX	11	28	54	2	5	43
	X	14	61	17	5	3	36

TABLE L—Concluded.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Physics	I	....	....	42	32	26	31
	II	4	15	22	31	28	54
	III	7	53	28	....	12	43
	IV	7	32	44	17	....	41
	V	22	9	64	....	5	55
	VI	11	9	38	36	6	47
	VII	30	39	17	5	9	54
	VIII	26	60	2	12	....	42
	IX	....	53	29	18	....	17
	X	49	24	22	5	....	37
Psychology	I	....	2	30	41	27	668
	II	....	5	45	34	16	692
	III	2	10	53	24	11	732
	IV	4	13	55	22	6	712
	V	6	18	44	22	10	775
	VI	6	20	55	14	5	738
	VII	7	24	52	15	2	748
	VIII	10	25	51	10	4	707
	IX	14	29	47	6	4	662
	X	33	32	29	3	3	703
Speech	I	....	4	44	28	24	184
	II	1	14	48	27	10	260
	III	4	12	54	22	8	250
	IV	1	21	50	16	12	291
	V	3	17	56	17	7	349
	VI	4	25	51	17	3	314
	VII	5	21	60	10	4	358
	VIII	7	32	49	10	2	341
	IX	7	37	47	6	3	387
	X	6	42	45	6	1	430
Sociology and Economics	I	....	6	44	36	14	84
	II	2	9	41	26	22	136
	III	2	24	52	11	11	185
	IV	2	16	53	15	14	173
	V	2	25	46	20	7	177
	VI	12	19	50	13	6	187
	VII	9	29	40	11	11	133
	VIII	7	28	44	17	4	138
	IX	10	38	44	3	5	97
	X	26	36	30	6	2	183
Totals	I	1	8	38	28	25	4,339
	II	2	13	44	23	18	5,492
	III	3	19	44	21	13	5,989
	IV	4	20	48	17	11	6,320
	V	6	22	47	17	8	6,380
	VI	6	25	48	14	7	6,220
	VII	9	27	48	10	6	6,308
	VIII	11	34	42	9	4	6,238
	IX	13	37	39	7	4	6,278
	X	25	40	29	4	2	6,379

Read table thus: Of the 65 semester hours which students of group I carried in the department of agriculture they obtained zero per cent of grade A; 3 per cent of grade B; 57 per cent of grade C; 32 per cent of D; and 8 per cent of F .

TABLE LI.—The per cent of each grade obtained by the students of each group in each department of the college during the sophomore year.

(For three classes which entered the Kansas State Teachers College of Emporia in the years 1925 to 1927, inclusive.)

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Agriculture	I	....	5	36	27	32	22
	II	....	15	54	21	10	59
	III	....	7	76	17	....	30
	IV	....	22	61	6	11	18
	V	....	38	62	....	....	13
	VI	....	17	17	25	41	12
	VII	13	45	17	22	3	40
	VIII	....	31	39	4	26	23
	IX	16	36	45	3	....	31
	X	20	60	10	....	10	10
Art	I	10	....	28	28	34	47
	II	4	42	30	12	12	107
	III	2	17	53	21	7	88
	IV	16	33	29	16	6	152
	V	1	28	47	20	4	100
	VI	5	38	36	10	11	73
	VII	21	36	39	4	....	67
	VIII	24	25	46	3	2	123
	IX	10	46	39	5	....	41
	X	35	44	15	6	....	85
Biology and Geology	I	2	6	74	16	2	115
	II	....	17	65	5	13	97
	III	9	16	63	5	7	194
	IV	17	33	44	6	....	117
	V	8	27	58	4	3	186
	VI	7	49	32	4	8	114
	VII	12	34	54	....	....	56
	VIII	7	36	40	3	14	120
	IX	9	46	28	12	5	114
	X	15	47	36	....	2	130
Chemistry	I	....	50	....	....	50	20
	II	....	....	100	....	....	15
	III	45	....	55	....	....	33
	IV	....	26	74	....	....	31
	V	....	39	46	15	....	33
	VI	....	37	50	....	13	40
	VII	16	35	22	27	....	45
	VIII	....	17	50	....	33	30
	IX	15	58	17	10	....	48
	X	26	38	13	23	....	78
Commerce	I	12	11	38	21	18	106
	II	....	13	55	17	15	127
	III	11	16	56	5	12	57
	IV	10	13	59	5	13	149
	V	4	23	43	18	12	132
	VI	14	18	30	3	35	125
	VII	12	41	32	10	5	180
	VIII	19	38	30	6	7	206
	IX	15	37	29	12	7	120
	X	14	45	35	4	2	122
English	I	....	2	15	31	52	238
	II	....	1	43	23	33	317
	III	....	2	45	26	27	295
	IV	1	5	57	24	13	278
	V	....	5	46	30	19	282
	VI	....	10	53	23	14	258
	VII	2	15	58	11	14	317
	VIII	4	27	54	13	2	351
	IX	9	31	41	11	8	455
	X	17	43	33	4	3	519

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TABLE LI—Continued.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education	I	....	....	53	37	10	218
	II	....	13	50	21	16	357
	III	2	12	64	18	4	309
	IV	2	22	60	15	1	454
	V	3	21	47	27	2	471
	VI	3	30	57	8	2	392
	VII	3	22	58	13	4	601
	VIII	2	26	56	13	3	508
	IX	4	33	47	12	4	404
	X	15	41	39	3	2	335
Freshman Survey	I	....	6	25	56	13	32
	II	....	....	21	43	36	28
	III	....	....	60	20	20	10
	IV	....	24	52	24	....	25
	V	....	13	37	37	13	16
	VI	....	25	....	....	75	8
	VII	....	75	25	....	....	8
	VIII	14	29	29	14	14	14
	IX	....	50	50	....	....	4
	X	40	....	20	40	....	10
Geography	I	....	18	29	9	44	34
	II	....	10	37	27	26	62
	III	13	10	50	11	16	38
	IV	16	12	41	17	14	64
	V	11	36	36	12	5	56
	VI	18	33	37	....	12	51
	VII	3	14	63	17	3	89
	VIII	8	27	34	15	16	79
	IX	15	36	37	8	4	80
	X	34	40	15	11	....	72
Health	I	3	19	52	11	15	186
	II	1	27	54	15	3	165
	III	3	26	48	17	6	119
	IV	14	30	42	9	5	100
	V	15	24	46	12	3	111
	VI	15	33	37	15	....	114
	VII	21	37	31	9	2	150
	VIII	24	32	38	4	2	123
	IX	19	44	30	3	4	151
	X	47	26	25	2	....	96
History and Government	I	....	....	26	19	55	31
	II	5	....	36	33	25	55
	III	....	11	35	54	....	26
	IV	....	31	45	16	8	38
	V	....	35	31	24	10	29
	VI	3	36	43	9	9	69
	VII	7	19	44	22	8	109
	VIII	6	30	36	17	11	147
	IX	5	40	39	9	7	172
	X	27	39	25	5	4	221
Home Economics	I	7	19	49	25	....	43
	II	3	39	49	5	4	77
	III	14	24	43	7	12	42
	IV	....	40	41	5	14	63
	V	15	....	55	30	....	27
	VI	13	70	17	....	....	23
	VII	9	56	21	14	....	43
	VIII	19	34	39	8	....	95
	IX	15	38	35	12	....	66
	X	40	8	32	20	....	25

TABLE LI—Continued.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Latin	I	....	....	....	....	....	....
	II	....	....	50	50	....	10
	III	....	62	38	....	....	24
	IV	....	....	100	....	....	15
	V	....	....	48	28	24	21
	VI	....	....	70	30	....	10
	VII	22	25	25	28	....	36
	VIII	5	41	34	20	....	41
	IX	17	54	29	....	....	66
	X	38	42	16	....	4	85
Manual Arts	I	10	31	44	10	5	61
	II	11	11	65	13	....	37
	III	10	37	47	4	2	92
	IV	26	....	61	....	13	38
	V	19	52	29	....	....	84
	VI	53	33	14	....	....	21
	VII	12	46	32	10	....	59
	VIII	....	48	31	....	21	29
	IX	26	19	32	10	13	31
	X	30	52	17	....	....	63
Mathematics	I	....	....	28	53	19	43
	II	....	....	37	35	28	43
	III	13	33	23	18	13	39
	IV	19	12	35	22	12	58
	V	....	16	24	27	33	55
	VI	31	17	33	....	19	36
	VII	13	40	41	3	3	91
	VIII	35	26	29	....	10	72
	IX	30	29	24	9	8	97
	X	44	19	19	6	12	80
Modern Language	I	....	....	22	45	33	45
	II	....	11	17	17	55	47
	III	13	....	19	55	13	78
	IV	....	....	29	26	45	66
	V	14	19	21	32	14	105
	VI	9	31	38	6	16	91
	VII	5	53	23	15	5	101
	VIII	27	19	28	15	10	150
	IX	10	32	40	12	6	146
	X	31	44	20	2	3	348
Music	I	3	26	36	23	12	68
	II	11	27	28	20	14	141
	III	9	21	49	19	2	150
	IV	8	48	36	4	4	135
	V	11	40	37	9	3	160
	VI	14	41	31	9	5	156
	VII	17	40	30	8	5	317
	VIII	13	42	30	10	5	216
	IX	15	48	30	5	2	229
	X	20	50	28	2	....	187
Physical Education	I	....	27	62	8	3	64
	II	4	35	48	10	3	58
	III	9	34	45	9	3	77
	IV	25	45	20	10	....	20
	V	27	24	45	....	4	82
	VI	17	35	37	8	3	60
	VII	20	38	40	2	....	50
	VIII	10	59	26	5	....	39
	IX	19	63	11	7	....	27
	X	42	38	21	....	....	24

TABLE LI—Concluded.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Physics	I	....	18	47	18	18	17
	II	12	12	11	47	18	17
	III	....	53	35	6	6	32
	IV	....	63	37	....	....	8
	V	29	20	43	....	8	35
	VI	....	25	47	8	19	36
	VII	63	11	16	10	....	19
	VIII	22	57	21	....	....	23
	IX	36	22	22	....	20	36
	X	12	70	18	....	....	17
Psychology	I	....	....	26	53	21	136
	II	....	4	50	33	13	183
	III	2	12	51	15	20	152
	IV	6	11	62	16	5	187
	V	2	15	56	22	5	199
	VI	4	19	59	14	4	198
	VII	4	16	50	20	10	250
	VIII	8	20	55	11	6	215
	IX	15	38	41	6	....	225
	X	28	33	32	2	5	251
Speech	I	....	13	33	43	11	61
	II	....	6	56	19	19	108
	III	....	11	49	33	7	101
	IV	1	25	61	11	2	104
	V	....	14	56	21	9	178
	VI	1	27	55	10	7	131
	VII	2	23	62	8	5	193
	VIII	7	33	48	12	1	174
	IX	5	30	44	9	12	205
	X	8	40	42	9	1	175
Sociology and Economics	I	....	9	35	28	28	102
	II	....	12	59	12	16	96
	III	3	13	58	14	12	105
	IV	3	15	41	27	14	104
	V	3	19	54	15	9	105
	VI	....	46	41	10	3	89
	VII	9	41	34	14	2	126
	VIII	5	38	36	18	3	115
	IX	11	42	37	6	4	155
	X	16	40	35	9	....	129
Totals	I	2	9	39	28	22	1,689
	II	2	14	47	20	17	2,206
	III	5	16	51	18	10	2,091
	IV	7	21	50	14	8	2,224
	V	6	22	46	19	7	2,480
	VI	7	29	45	10	9	2,107
	VII	9	29	45	12	5	2,947
	VIII	11	30	43	10	6	2,893
	IX	12	37	37	9	5	2,903
	X	24	40	29	5	2	3,062

Read table thus: Of the 22 semester hours which students of group I carried in the department of agriculture, they obtained zero per cent of grade A; 5 per cent of grade B; 36 per cent of C; 27 per cent of D; and 32 per cent of F.

TABLE LII.—The per cent of each grade obtained by the students of each group in each department of the college during the junior and senior years.

(For two classes which entered the Kansas State Teachers College of Emporia in the years 1926 and 1927.)

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Agriculture............................	I	....	....	100	....	....	6
	II	8	60	32	....	....	25
	III	....	25	25	50	....	12
	IV	....	60	40	....	....	5
	V	....	31	44	25	....	16
	VI	....	....	....	....	....	....
	VII	13	35	21	22	9	23
	VIII	....	29	43	....	28	7
	IX	39	17	44	....	....	23
	X	....	....	....	....	....	....
Art.....................................	I	....	44	56	....	....	16
	II	36	28	36	....	....	14
	III	15	31	27	19	8	26
	IV	....	40	52	8	....	40
	V	20	6	46	8	20	35
	VI	....	50	39	11	....	28
	VII	48	9	39	4	....	44
	VIII	19	43	38	....	....	47
	IX	50	50	....	....	....	24
	X	22	52	10	16	....	31
Biology and Geology.....................	I	....	44	28	28	....	18
	II	....	32	52	16	....	31
	III	....	42	49	9	....	33
	IV	10	19	57	10	4	51
	V	14	33	40	13	....	78
	VI	....	17	44	29	10	41
	VII	....	17	83	....	....	23
	VIII	....	64	36	....	....	56
	IX	14	39	47	....	....	64
	X	52	37	11	....	....	44
Chemistry.............................	I	....	....	....	....	....	....
	II	....	31	69	....	....	16
	III	14	36	14	36	....	22
	IV	18	46	18	18	....	28
	V	100	....	....	....	....	5
	VI	....	11	53	....	36	28
	VII	....	....	67	33	....	15
	VIII	....	33	33	17	17	30
	IX	23	54	23	....	....	43
	X	60	20	20	....	....	25
Commerce.............................	I	....	3	46	33	18	72
	II	....	16	39	28	17	36
	III	8	28	44	12	8	25
	IV	....	39	49	7	5	43
	V	....	16	45	39	....	51
	VI	9	14	66	11	....	35
	VII	10	31	31	17	11	77
	VIII	24	19	53	....	4	72
	IX	14	59	19	....	8	59
	X	10	58	32	....	....	31
English...............................	I	....	....	24	29	47	71
	II	....	8	21	41	30	61
	III	....	8	50	17	25	129
	IV	....	12	41	31	16	108
	V	....	3	55	23	19	93
	VI	....	4	58	22	16	69
	VII	12	16	38	21	13	103
	VIII	6	33	38	11	12	119
	IX	8	23	40	16	13	150
	X	16	33	35	8	8	186

TABLE LII--CONTINUED.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education........................	I	....	16	37	26	21	62
	II	....	29	55	12	4	68
	III	7	18	54	14	7	161
	IV	3	21	55	17	4	144
	V	3	20	41	24	12	122
	VI	2	41	40	7	10	110
	VII	13	21	41	20	5	119
	VIII	7	38	42	12	1	202
	IX	10	46	42	2	....	177
	X	16	26	49	8	1	186
Geography......................	I	....	....	43	14	43	21
	II	40	....	30	....	30	10
	III	....	48	52	....	....	27
	IV	....	....	100	....	....	10
	V	....	15	41	12	32	34
	VI	....	23	77	....	....	13
	VII	17	....	83	....	....	18
	VIII	15	20	35	30	....	20
	IX	29	42	29	....	....	24
	X	40	37	15	....	8	40
Health.........................	I	6	24	44	4	22	50
	II	18	39	38	5	....	61
	III	10	32	37	15	6	88
	IV	8	22	50	5	15	40
	V	7	42	42	5	4	69
	VI	20	23	43	6	8	35
	VII	14	29	47	10	....	58
	VIII	10	32	46	12	....	60
	IX	....	43	57	....	....	23
	X	....	66	34	....	....	38
History and Government............	I	....	....	....	....	100	6
	II	....	....	33	67	....	9
	III	....	18	45	22	15	40
	IV	4	23	17	33	23	52
	V	....	21	48	21	10	29
	VI	....	16	56	19	9	32
	VII	....	32	18	18	32	28
	VIII	6	41	35	6	12	51
	IX	42	16	23	19	....	64
	X	31	36	30	....	3	100
Home Economics..................	I	15	39	....	46	....	13
	II	....	44	56	....	....	27
	III	29	64	7	....	....	28
	IV	50	30	20	....	....	10
	V	....	....	....	100	....	3
	VI	39	33	28	....	....	18
	VII	....	73	27	....	....	11
	VIII	15	10	63	7	5	41
	IX	18	38	23	21	....	39
	X	100	....	....	....	....	8
Latin..........................	I	....	....	....	....	....	....
	II	....	....	....	....	100	5
	III	....	....	45	55	....	22
	IV	....	....	50	50	....	4
	V	....	....	75	....	25	20
	VI	....	....	100	....	....	14
	VII	....	....	56	37	7	27
	VIII	11	26	63	....	....	19
	IX	32	50	18	....	....	28
	X	39	28	33	....	....	43

TABLE LII—Continued.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Manual Arts	I	18	41	23	....	18	17
	II	....	67	20	13	....	15
	III	22	41	28	....	9	32
	IV	16	28	40	8	8	25
	V	17	38	38	....	7	47
	VI						
	VII	12	49	39	....	....	33
	VIII	....	100	....	....	....	4
	IX	....	....				
	X	....	100	....	....	....	4
Mathematics	I	....	....	50	....	50	8
	II	67	....	33	....	....	6
	III	....	29	71	....	....	7
	IV	39	....	15	....	46	13
	V	....	39	52	....	9	23
	VI	....	....	....	25	75	12
	VII	....	11	46	11	32	28
	VIII	14	53	6	6	11	35
	IX	47	35	6	....	12	49
	X	22	31	39	....	8	36
Modern Language	I	....	....	....	100	....	10
	II	....	10	45	10	35	51
	III	....	30	48	7	15	94
	IV	....	14	38	27	21	73
	V	....	28	20	36	16	83
	VI	36	21	43	....	....	28
	VII	6	17	26	45	6	88
	VIII	....	29	53	18	....	34
	IX	8	34	34	19	5	62.
	X	25	31	38	6	....	175
Music	I	....	36	29	21	14	13
	II	....	53	47	....	....	15
	III	8	44	23	17	8	51
	IV	20	41	26	10	3	78
	V	31	46	12	3	8	63
	VI	22	39	33	6	....	155
	VII	24	37	20	14	5	142
	VIII	15	38	20	10	17	58
	IX	16	38	38	2	6	101
	X	23	34	43	....	....	47
Physical Education	I	12	59	17	....	12	17
	II	10	33	45	12	....	87
	III	29	39	32	....	....	93
	IV	....	12	76	6	6	33
	V	4	38	54	4	....	73
	VI	....	25	56	19	....	32
	VII	9	58	24	5	4	75
	VIII	14	52	34	....	....	35
	IX	17	52	31	....	....	23
	X	39	18	26	17	....	23
Physics	I	....	....	60	40	....	5
	II	....	45	....	55	....	11
	III	11	11	28	17	28	18
	IV	10	30	60	....	....	20
	V	17	....	56	28	....	18
	VI	....	35	....	35	30	23
	VII	....	....	50	....	50	6
	VIII	....	50	25	....	25	12
	IX	....	....	100	....	....	3
	X	35	41	24	....	....	51

Kansas State Teachers College of Emporia.

TABLE LII—CONCLUDED.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Psychology and Philosophy...............	I	....	....	55	26	19	31
	II	13	....	29	45	13	45
	III	....	17	55	25	3	93
	IV	....	5	53	29	13	55
	V	7	7	69	13	4	83
	VI	....	36	52	12	....	44
	VII	5	15	58	16	6	100
	VIII	4	40	52	4	....	70
	IX	16	24	58	2	....	124
	X	29	31	34	6	....	172
Speech..................................	I	....	....	12	29	59.	17
	II	....	21	42	21	16	19
	III	....	4	56	19	21	52
	IV	....	37	33	25	5	64
	V	....	17	59	20	4	46
	VI	....	33	62	5	....	39
	VII	9	48	41	....	2	81
	VIII	13	53	22	1	10	77
	IX	....	37	50	5	8	90
	X	14	19	55	10	2	42
Sociology and Economics................	I	....	....	63	12	25	24
	II	7	29	22	21	21	42
	III	....	29	59	12	....	51
	IV	4	....	58	25	13	72
	V	....	4	76	12	8	75
	VI	....	36	44	20	....	59
	VII	6	29	35	18	12	51
	VIII	3	27	53	14	3	89
	IX	17	50	22	3	8	108
	X	19	43	24	14	....	111
Totals.................................	I	2	13	36	23	26	477
	II	7	26	39	17	11	654
	III	7	25	45	14	9	1,104
	IV	6	22	45	18	9	968
	V	7	22	46	16	9	1,066
	VI	8	28	45	12	7	815
	VII	12	27	38	16	7	1,150
	VIII	9	37	40	8	6	1,138
	IX	17	37	36	6	4	1,278
	X	25	34	34	5	2	1,393

Read table thus: Of the 6 semester hours which students of group I carried in the department of agriculture they obtained 100 per cent of grade C.

TABLE LIII.—The per cent of each grade obtained by the students of each group in each department during the four years of college.

(For four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Agriculture............................	I	....	3	55	29	13	93
	II	8	17	47	21	7	169
	III	5	26	49	16	4	159
	IV	6	35	43	5	11	108
	V	4	29	52	9	6	82
	VI	2	49	35	8	6	90
	VII	19	38	26	12	5	141
	VIII	7	42	37	5	9	85
	IX	24	27	46	1	2	98
	X	16	57	24	....	3	37
Art................................	I	2	10	36	30	22	304
	II	7	28	45	11	9	365
	III	7	30	39	14	10	432
	IV	8	29	37	16	10	641
	V	7	27	48	12	6	505
	VI	4	29	44	14	9	398
	VII	18	27	45	6	4	454
	VIII	16	41	36	5	2	502
	IX	17	40	35	5	3	328
	X	28	35	29	6	2	458
Biology and Geology.....................	I	2	16	62	14	6	380
	II	3	23	51	12	11	391
	III	8	25	54	6	7	573
	IV	10	36	44	8	2	463
	V	9	35	44	9	3	555
	VI	6	38	44	5	7	415
	VII	11	43	39	2	5	288
	VIII	11	44	39	2	4	376
	IX	14	43	35	5	3	373
	X	21	50	25	2	2	310
Chemistry............................	I	....	13	47	7	33	75
	II	....	7	52	21	20	146
	III	18	11	38	27	6	160
	IV	10	23	38	12	17	192
	V	4	12	53	27	4	113
	VI	5	25	46	8	16	192
	VII	11	24	35	17	13	150
	VIII	3	25	47	11	14	141
	IX	16	48	27	6	3	169
	X	35	35	14	13	3	213
Commerce.............................	I	4	10	37	22	27	462
	II	2	11	43	28	16	561
	III	4	19	43	19	15	424
	IV	6	21	49	11	13	592
	V	5	24	48	16	7	638
	VI	13	26	34	10	17	567
	VII	13	29	40	9	9	685
	VIII	19	35	30	11	5	829
	IX	17	37	34	8	4	597
	X	24	42	29	4	1	481
English..............................	I	....	2	22	28	48	751
	II	....	2	40	25	33	1,100
	III	....	4	42	25	29	1,282
	IV	1	7	50	25	17	1,270
	V	1	9	51	24	15	1,292
	VI	1	13	54	20	12	1,240
	VII	2	18	57	13	10	1,401
	VIII	5	30	50	10	5	1,493
	IX	9	33	44	7	7	1,644
	X	20	43	31	3	3	1,826

LIII—Continued.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education	I	....	3	39	36	22	819
	II	1	12	48	23	16	944
	III	2	17	54	21	6	1,071
	IV	3	21	56	15	5	1,381
	V	3	20	49	23	5	1,259
	VI	2	29	53	12	4	1,100
	VII	4	26	54	13	3	1,323
	VIII	4	33	52	8	3	1,275
	IX	10	39	42	7	2	1,194
	X	16	42	36	4	2	1,034
Freshman Survey	I	....	4	34	39	23	444
	II	....	8	41	31	20	466
	III	....	11	50	25	14	474
	IV	1	16	52	22	9	504
	V	4	13	53	20	10	464
	VI	3	20	60	11	6	454
	VII	6	22	59	8	5	432
	VIII	11	24	47	12	6	450
	IX	11	35	41	12	1	412
	X	23	37	34	4	2	418
Geography	I	....	7	38	25	32	154
	II	2	12	40	23	23	248
	III	2	19	40	28	11	268
	IV	5	20	50	17	8	322
	V	7	21	42	18	12	284
	VI	3	30	53	12	2	277
	VII	5	12	60	15	8	309
	VIII	6	23	47	17	7	272
	IX	8	39	39	10	4	307
	X	32	40	21	5	2	287
Health	I	4	17	52	14	13	587
	II	4	27	51	10	8	700
	III	7	33	39	14	7	655
	IV	12	27	47	8	6	525
	V	13	31	39	13	4	624
	VI	12	33	41	9	5	528
	VII	15	37	37	8	3	527
	VIII	21	35	39	5	....	414
	IX	19	40	33	5	3	474
	X	41	38	18	2	1	347
History and Government	I	....	11	35	15	39	100
	II	2	10	25	27	36	195
	III	....	9	34	34	23	206
	IV	2	20	38	24	16	240
	V	2	22	50	19	7	242
	VI	3	16	48	21	12	302
	VII	7	21	46	19	7	395
	VIII	8	33	36	12	11	463
	IX	13	34	38	10	5	518
	X	21	39	30	8	2	662
Home Economics	I	5	17	34	29	15	110
	II	2	38	45	9	6	158
	III	14	33	31	12	10	102
	IV	7	28	47	12	6	151
	V	11	17	46	26	....	78
	VI	16	54	30	....	....	88
	VII	9	36	28	20	7	114
	VIII	17	32	43	6	2	245
	IX	16	38	32	13	1	177
	X	32	35	22	11	....	78

LIII—Continued.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Latin	I	....	....	....	....	....	....
	II	....	14	14	57	15	35
	III	....	30	51	19	....	91
	IV	10	21	45	14	10	49
	V	....	9	61	11	19	54
	VI	10	28	48	14	....	79
	VII	9	28	36	25	2	119
	VIII	10	35	40	15	....	89
	IX	23	44	18	6	9	174
	X	31	35	29	1	4	252
Manual Arts	I	9	23	54	7	7	180
	II	8	21	60	9	2	146
	III	9	37	44	5	5	220
	IV	13	13	52	13	9	158
	V	14	46	34	4	2	257
	VI	29	45	26	....	....	89
	VII	9	40	46	5	....	125
	VIII	....	38	49	2	11	80
	IX	26	22	40	5	7	58
	X	20	56	24	....	....	96
Mathematics	I	2	2	33	37	26	201
	II	3	2	54	20	21	241
	III	7	18	34	27	14	323
	IV	10	21	41	16	12	312
	V	2	25	46	11	16	319
	VI	11	25	39	11	14	307
	VII	15	29	42	6	8	408
	VIII	23	35	34	4	4	336
	IX	34	32	22	6	6	405
	X	41	29	21	3	6	366
Modern Language	I	....	....	20	34	46	99
	II	....	6	31	27	36	163
	III	4	13	41	27	15	257
	IV	....	10	38	26	26	216
	V	5	22	27	28	18	308
	VI	9	24	37	13	17	334
	VII	6	36	29	22	8	397
	VIII	15	29	31	14	11	510
	IX	7	41	35	13	4	534
	X	31	38	24	4	3	972
Music	I	5	33	34	12	16	242
	II	8	35	35	14	8	439
	III	8	37	39	13	3	431
	IV	11	41	32	8	8	468
	V	14	45	30	17	4	555
	VI	16	37	33	9	5	639
	VII	18	44	27	6	5	859
	VIII	15	46	26	8	5	598
	IX	17	44	31	5	3	795
	X	25	43	27	3	2	613
Physical Education	I	5	34	42	13	6	148
	II	6	33	46	9	6	223
	III	19	37	35	8	1	245
	IV	12	31	45	7	5	88
	V	18	28	43	5	6	208
	VI	8	31	48	10	3	142
	VII	17	44	34	3	2	163
	VIII	12	46	37	3	2	111
	IX	15	44	36	3	2	93
	X	29	42	21	7	1	83

TABLE LIII—Concluded.

Department.	Group.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Physics..............................	I	....	6	45	28	21	53
	II	5	18	17	38	22	82
	III	7	45	30	5	13	93
	IV	7	35	48	10	....	69
	V	23	11	55	5	6	108
	VI	5	20	33	26	16	106
	VII	36	29	19	6	10	79
	VIII	21	57	12	6	4	77
	IX	23	30	29	5	13	56
	X	36	40	22	2	....	105
Psychology and Philosophy...............	I	....	2	30	42	26	835
	II	1	5	45	34	15	920
	III	2	11	53	23	11	977
	IV	4	12	57	21	6	954
	V	5	16	48	22	9	1,057
	VI	6	21	55	14	4	980
	VII	6	21	53	16	4	1,098
	VIII	9	25	52	10	4	992
	IX	14	30	47	6	3	1,011
	X	31	32	31	3	3	1,126
Speech................................	I	....	6	39	32	23	262
	II	1	13	50	24	12	387
	III	3	10	53	24	10	403
	IV	1	24	50	16	9	459
	V	2	16	56	19	7	573
	VI	3	26	53	14	4	484
	VII	5	25	58	8	4	632
	VIII	8	35	45	9	3	592
	IX	6	35	46	7	6	682
	X	7	40	45	7	1	647
Sociology and Economics.................	I	....	7	42	29	22	210
	II	2	13	45	20	20	274
	III	2	22	55	12	9	341
	IV	3	12	51	21	13	349
	V	2	19	55	17	7	357
	VI	7	29	46	13	5	335
	VII	8	34	37	13	8	310
	VIII	5	31	44	16	4	342
	IX	12	44	34	4	6	360
	X	21	39	30	9	1	423
Totals................................	I	2	9	38	27	24	6,509
	II	3	14	44	22	17	8,353
	III	4	19	46	19	12	9,187
	IV	5	20	48	17	10	9,511
	V	6	22	47	17	8	9,932
	VI	6	26	47	13	8	9,046
	VII	10	28	46	11	5	10,409
	VIII	11	33	42	9	5	10,272
	IX	13	37	39	7	4	10,459
	X	24	39	29	4	2	10,834

Read table thus: Of the 93 semester hours which students of group I carried in the department of agriculture, they obtained zero per cent of grade A; 3 per cent of grade B; 55 per cent of C; 29 per cent of D; and 13 per cent of F.

arts comes nearest to being an exception to the above statement. But even in that department students of higher groups obtained on the average a larger proportion of superior grades than lower groups. In no department did lower groups obtain a larger proportion of superior grades, that is, succeed better academically, than higher groups.

For the sophomore year and for the junior and senior years combined there seems to have been no clear-cut tendency in some departments respecting group rank and grades obtained. It will be observed, however, that the number of cases for most of these departments was insufficient to warrant definite conclusions or even to expect normal distributions. For departments which had an ample number of cases for these years, such as English, education, modern languages, music, psychology, and speech, the tendency pointed out above was just as pronounced for these years as for the freshman year or for the four years of college combined.

In order to focus attention upon the differences in the academic success which students of the different groups attained in several representative departments, parts of Table LIII are repeated in Table LIV. The table presents the percentage distribution of grades which each group obtained during the four years of college in each of the departments of English, manual arts, history and music.

It will be noted that the differences are very pronounced. While low-ranking groups did not attain the same academic success as higher ranking groups in the departments of manual arts and music, they succeeded materially better than they did in the departments of English and history. Other things being equal, the students of the low groups obviously should choose to major in manual arts, music, or some other department of that type rather than in English, history, or a similar department.

CORRELATIONS BETWEEN GROUP RANKS AND DEPARTMENTAL AVERAGE GRADES.

Correlations were computed between the group ranks of the students who entered college in 1924 and the average grade each obtained in each department during the time of his college attendance up to June, 1927. The correlation coefficients yielded are shown in Table LV.

It is significant that all the r's were positive. For the men they ranged from .22 to .60; for the women from .21 to .59; and for both sexes combined from .23 to .56. For both sexes combined all the r's were more than four times their P. E.'s and, therefore, significant; but in a few cases this was not the case for either the men or the women only because of the paucity of cases.

A few of the correlations, notably those for the departments of English, freshman survey, history, home economics, mathematics, modern languages, and psychology, were quite high, both for each sex alone and for the sexes combined. Most of them, however, were not sufficiently large to be highly significant. That all of these correlations were positive is significant, however, because it indicates that although group rank is a less important factor in determining academic success in some departments than in others, it is nevertheless a positive factor in all. In no department does preparation as measured by the entrance tests have no influence in determining academic

TABLE LIV.—The per cent of grades obtained by each group during the four years of college in the departments of English, Manual Arts, History and Music.

(For four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Group.	English.						Manual Arts.					
	Per cent.					Total hours.	Per cent.					Total hours.
	A	B	C	D	F		A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I		2	22	28	48	751	9	23	54	7	7	180
II		2	40	25	33	1,100	8	21	60	9	2	146
III		4	42	25	29	1,282	9	37	44	5	5	220
IV	1	7	50	25	17	1,270	13	13	52	13	9	158
V	1	9	51	24	15	1,292	14	46	34	4	2	257
VI	1	13	54	20	12	1,240	29	45	26			89
VII	2	18	57	13	10	1,401	9	40	46	5		125
VIII	5	30	50	10	5	1,493		38	49	2	11	80
IX	9	33	44	7	7	1,644	26	22	40	5	7	58
X	20	43	31	3	3	1,826	20	56	24			96
Totals	5	18	45	17	14	13,299	12	34	44	5	4	1,409

Group.	History.						Music.					
	Per cent.					Total hours.	Per cent.					Total hours.
	A	B	C	D	F		A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I		11	35	15	39	100	5	33	34	12	16	242
II	2	10	25	27	36	195	8	35	35	14	8	439
III		9	34	34	23	206	8	37	39	13	3	431
IV	2	20	38	24	16	240	11	41	32	8	8	468
V	2	22	50	19	7	242	14	45	30	17	4	555
VI	3	16	48	21	12	302	16	37	33	9	5	639
VII	7	21	46	19	7	395	18	44	27	6	5	859
VIII	8	33	36	12	11	463	15	46	26	8	5	598
IX	13	34	38	10	5	518	17	44	31	5	3	795
X	21	39	30	8	2	662	25	43	27	3	2	613
Totals	9	26	38	16	11	3,323	15	42	32	8	5	5,642

Read table thus: Of the 751 hours the students of group I carried in the department of English, a grade of B was recorded in 2 per cent; C in 22 per cent; D in 28 per cent; and F in 48 per cent.

TABLE LV.—Correlations between group ranks and average grades obtained in various departments of the college.

Correlation between group and:	Men.		Women.		Total.	
	r ± P. E.	No. of cases.	r ± P. E.	No. of cases.	r ± P. E.	No. of cases
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Agriculture.....................	.36 ± .09	41	.33 ± .08	50	.33 ± .06	91
Art............................			.35 ± .04	296		
Biology and Geology............	.22 ± .07	94	.26 ± .04	247	.24 ± .03	341
Chemistry......................	.56 ± .07	43	.21 ± .06	35	.56 ± .05	
Commerce......................	.38 ± .06	97	.26 ± .05	158	.32 ± .04	255
English........................	.60 ± .03	170	.59 ± .02	472	.56 ± .02	642
Education......................	.36 ± .07	66	.46 ± .03	441	.45 ± .02	507
Freshman Survey...............	.42 ± .04	204	.51 ± .02	490	.48 ± .02	694
Geography.....................	.31 ± .09	46	.39 ± .04	209	.37 ± .04	255
Health........................	.24 ± .07	91	.40 ± .03	261	.32 ± .03	352
History........................	.45 ± .06	85	.44 ± .04	151	.45 ± .04	236
Home Economics...............			.55 ± .06	72		
Latin..........................	.41 ± .15	14	.21 ± .13	23	.47 ± .09	37
Manual Arts...................	.23 ± .10	44				
Mathematics...................	.47 ± .06	71	.53 ± .04	183	.54 ± .03	254
Modern Languages.............	.50 ± .06	70	.46 ± .06	89	.49 ± .04	159
Music.........................			.22 ± .05			
Physical Education.............	.28 ± .07	74	.45 ± .08	46	.36 ± .05	120
Psychology....................	.49 ± .04	186	.51 ± .02	487	.50 ± .02	673
Speech........................	.41 ± .05	119	.33 ± .03	343	.34 ± .03	462
Sociology......................	.41 ± .06	99	.29 ± .06	124	.38 ± .04	223

Read table thus: Between group ranks and grades obtained in the department of agriculture, for men r = .36 ± .09; for women r = .33 ± .08; and for the students of both sexes combined r = .33 ± .06.

success. More than that, in no department do students of the low-group ranks on the entrance tests, on the average, meet with more superior academic success than those of the high-group ranks.

SEX DIFFERENCES IN DEPARTMENTAL SUCCESS.

Sex differences in academic success have previously been considered in this study. In order to show what differences, if any, exist respecting this factor in relation to group rank and department, a few data pertaining to this topic are presented.

Table LVI shows the per cent of each grade each sex of groups I and X obtained in each department during the four years of college. In this table the data were excluded for such departments as attract almost exclusively a single sex and such other departments for which the total hours for either sex or for either of the two groups, I and X, are small.

It will be observed from this table, as was also previously pointed out, that as a rule women succeed better academically than do men. This is particularly noticeable in the per cent of students of the two sexes of group I who made D or F grades. In nearly every department the men obtained a larger per cent of these grades than the women. In no department, however, did either sex have an exclusive monopoly on either all the superior grades or all the inferior grades. In a few departments, for examples, biology and geology, English, and modern languages, the women succeeded proportionally

TABLE LVI.—The per cent of each grade obtained by each sex of groups I and X in each department during the four years of college.

(For four classes which entered the Kansas State Teachers College of Emporia during the years 1924 to 1927, inclusive.)

Department.	Group.	Sex.	A	B	C	D	F	No. hrs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Biology and Geology	I	M	1	7	65	18	9	185
	I	W	4	24	59	10	3	195
	X	M	11	49	34	......	6	125
	X	W	27	51	19	3	......	185
Chemistry	I	M	......	25	25	13	37	40
	I	W	......	......	71	......	29	35
	X	M	35	42	7	13	3	143
	X	W	36	21	29	14	......	70
Commerce	I	M	......	8	24	28	40	198
	I	W	7	12	46	17	18	264
	X	M	33	31	29	5	2	143
	X	W	20	47	30	2	1	338
English	I	M	......	1	16	27	56	221
	I	W	......	3	24	28	45	530
	X	M	11	34	43	6	6	476
	X	W	23	46	27	3	1	1,350
Education	I	M	......	9	15	30	46	79
	I	W	......	2	42	36	20	740
	X	M	18	33	36	8	5	121
	X	W	16	44	36	3	1	913
Geography	I	M	......	18	41	9	32	34
	I	W	......	3	37	28	32	120
	X	M	28	44	15	8	5	60
	X	W	33	39	23	4	1	227
Health	I	M	6	18	47	16	14	222
	I	W	3	16	55	13	13	365
	X	M	28	57	8	3	4	77
	X	W	44	33	22	1	......	270
History and Government	I	M	......	19	19	21	41	42
	I	W	......	5	47	10	38	58
	X	M	14	46	28	9	3	219
	X	W	25	35	30	8	2	443
Mathematics	I	M	......	......	39	28	33	39
	I	W	2	2	32	39	25	162
	X	M	25	34	16	10	15	110
	X	W	48	26	23	......	3	256
Modern Language	I	M	......	......	13	27	60	75
	I	W	......	......	42	58	......	24
	X	M	22	39	26	7	6	340
	X	W	36	37	23	3	1	632
Music	I	M	6	33	34	8	19	90
	I	W	5	34	33	14	14	152
	X	M	30	41	22	2	5	191
	X	W	23	43	30	4	......	421
Psychology	I	M	......	3	25	38	34	254
	I	W	......	1	33	44	22	581
	X	M	34	28	29	5	4	340
	X	W	30	34	31	3	2	786
Speech	I	M	......	1	28	37	34	112
	I	W	......	9	48	28	15	150
	X	M	6	29	52	10	3	174
	X	W	7	45	42	6	......	473
Sociology and Economics	I	M	......	6	45	33	16	141
	I	W	......	7	36	22	35	69
	X	M	13	37	35	13	2	183
	X	W	27	41	26	6	......	240

Read table thus: Of the 185 hours the men of group I carried in the department of biology and geology, a grade of A was recorded in 1 per cent; B in 6 per cent; C in 65 per cent; and so on. In column 3, the letter "M" and the letter "W" stand for "men" and "women," respectively.

better than the men, at least in so far as the data for the two groups may be interpreted. In most of the other departments, neither sex had an outstanding advantage over the other except the general advantage of the women as a whole.

To present the details of this topic more concretely, the distribution of the per cent of grades obtained by each sex of each of the ten groups in several representative departments are shown in Tables LVII to LX.

From Table LVII it will be seen that in the department of English the women succeeded decidedly better than did the men, but group rank was a larger discriminating factor than sex. For example, group III of the men made a better record than group I of the women; group VIII of the men made a better showing than group V of the women; group X of the men made a better showing than group VIII of the women. The men of the higher ranking groups on the entrance tests succeeded just as well as the women ranking several groups lower on these tests, and considerably better than the women ranking four or five groups lower.

From Tables LVIII, LIX and LX it will be noted that although the women on the average, group by group, obtained a larger percentage of superior grades and a smaller percentage of inferior grades than the men in the departments of psychology, music, and speech, their advantages were nearly equally distributed over the group range. The women of a lower group, while obtaining a slightly higher average than the men of that group, rarely succeeded in surpassing materially the men of higher groups.

In conclusion, it may be stated that apparently neither sex has extraordinary advantages over the other in any department of the college. In a few departments one or the other sex may have a slight advantage, but the data are insufficient to support a definite conclusion regarding this.

TABLE LVII.—The per cent of grades obtained by each sex of each group during the four years of college in the department of English.

(For the four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Group.	Men.						Women.					
	Per cent.					Total hours.	Per cent.					Total hours.
	A	B	C	D	F		A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I.............	......	1	16	27	56	221	......	3	24	28	45	530
II.............	......	......	23	25	52	333	......	3	46	26	25	767
III.............	......	5	32	23	40	398	......	3	47	26	24	884
IV.............	1	2	32	31	34	305	1	8	56	23	12	965
V.............	......	7	42	29	22	417	1	9	56	22	12	875
VI.............	2	5	42	27	24	350	1	17	58	17	7	890
VII.............	......	5	41	22	32	295	3	21	61	11	4	1,106
VIII.............	3	16	46	17	18	257	6	32	51	9	2	1,236
IX.............	8	22	41	12	17	393	10	36	45	6	3	1,251
X.............	11	34	43	6	6	476	23	46	27	3	1	1,350
Totals......	3	11	37	21	28	3,445	6	21	47	15	11	9,854

Read table thus: Of the 221 hours the men of group I carried in the department of English, they obtained 1 per cent grades of B, 16 per cent grades of C, 27 per cent grades of D, and 56 per cent grades of F. Of the 530 hours the women of group I carried in this department, they obtained 3 per cent grades of B, 25 per cent grades of C, and so on.

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TABLE LVIII.—The per cent of grades obtained by each sex of each group during the four years of college in the department of Psychology.

(For the four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Group.	Men.						Women.					
	Per cent.					Total hours.	Per cent.					Total hours.
	A	B	C	D	F		A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I	......	3	25	38	34	254	......	1	33	44	22	581
II	1	3	36	39	21	313	1	6	49	32	12	607
III	2	7	44	27	20	268	2	12	56	22	8	709
IV	2	10	40	35	13	171	4	13	60	19	4	783
V	7	14	43	24	12	319	5	17	51	20	7	738
VI	3	13	54	20	10	268	7	23	56	12	2	712
VII	1	13	52	28	6	251	8	24	53	12	3	847
VIII	1	18	52	15	14	196	11	27	52	8	2	796
IX	23	22	42	9	4	221	12	33	48	5	2	790
X	34	28	29	5	4	340	30	34	31	3	2	786
Totals	8	13	41	24	14	2,601	8	20	49	17	6	7,349

Read table thus: Of the 254 hours the men of group I carried in the department of Psychology, they obtained 4 per cent grades of B, 25 per cent grades of C, 38 per cent grades of D, and 34 per cent grades of F. Of the 581 hours the women of group I carried in this department, they obtained 1 per cent grades of B, 33 per cent grades of C, and so on.

TABLE LIX.—The per cent of grades obtained by each sex of each group during the four years of college in the department of Music.

(For the four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Group.	Men.						Women.					
	Per cent.					Total hours.	Per cent.					Total hours.
	A	B	C	D	F		A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I	6	33	34	8	19	90	5	34	33	14	14	152
II	3	24	43	9	21	35	8	36	34	15	7	404
III	......	34	31	27	8	24	8	37	40	12	3	407
IV	......	26	28	6	40	46	12	43	33	8	4	421
V	13	41	44	5	7	98	14	46	29	7	4	457
VI	9	31	39	7	14	139	19	39	31	9	2	499
VII	13	35	35	11	6	243	20	47	24	5	4	616
VIII	12	43	26	11	8	143	15	47	26	8	4	455
IX	8	38	42	5	7	114	18	45	29	5	3	681
X	30	41	22	2	5	191	23	43	30	4	......	421
Totals	13	37	32	8	10	1,125	15	43	30	8	4	4,516

Read table thus: Of the 90 hours the men of group I carried in the department of Music, they obtained 6 per cent grades of A, 33 per cent grades of B, 34 per cent grades of C, 8 per cent grades of D, and 19 per cent grades of F. Of the 152 hours the women of group I carried in this department, they obtained 5 per cent grades of A, 34 per cent grades of B, 33 per cent grades of C, and so on.

TABLE LX.—The per cent of grades obtained by each sex of each group during the four years of college in the department of Speech.

(For the four classes which entered the Kansas State Teachers College of Emporia in the years 1924 to 1927, inclusive.)

Group.	Men.						Women.					
	Per cent.					Total hours.	Per cent.					Total hours.
	A	B	C	D	F		A	B	C	D	F	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I............	......	1	28	37	34	112	......	9	48	28	15	150
II............	......	9	37	34	20	104	1	14	54	21	10	283
III............	......	6	45	32	17	121	4	12	57	21	6	282
IV............	2	21	32	22	23	117	1	25	56	14	4	342
V............	3	2	54	28	13	173	2	22	57	14	5	400
VI............	3	16	52	17	12	130	2	30	54	13	1	354
VII............	1	22	54	11	12	140	6	26	59	7	2	492
VIII............	......	29	49	18	4	108	9	37	44	7	3	484
IX............	3	27	45	12	13	·162	7	37	47	5	4	520
X............	6	29	52	10	3	174	7	45	42	6	......	473
Totals......	2	17	46	21	14	1,341	5	29	51	11	4	3,780

Read table thus: Of the 112 hours the men of group I carried in the department of Speech, they obtained 1 per cent grades of B, 28 per cent grades of C, 38 per cent grades of D, 34 per cent grades of F. Of the 150 hours the women of group I carried in this department, they obtained 9 per cent grades of B, 48 per cent grades of C, and so.on.

SUMMARY.

1. Higher average grades were obtained in some departments of the college than in others, both for the first semester of the freshman year and for the four years of college. The range of departmental average grade indices for the freshman year was from 2.45 (B—) to 3.24 (C, or practically C—), and for the four years of college, from 2.52 (C+) to 3.14 (C). From this it is apparent that students were somewhat more successful in meeting academic requirements in some departments than in others. Whether these differences were due to differences in departmental requirements, the intrinsic nature of the departmental work, or other factors was not determined.

2. For the four years, in every department of the college, the average grade index obtained by high-ranking groups on the entrance tests was superior to the average grade index of low-ranking groups. For a single semester, while a few exceptions existed, the trend in this respect was also pronounced. This condition prevailed in the nonacademic departments as well as in the academic departments.

3. In some of the nonacademic departments, such as music and manual arts, low-ranking student groups on the entrance tests obtained higher average grades than in others of the nonacademic departments and in many of the academic departments. On the other hand, these same low-ranking groups on the entrance tests obtained just as low average grades in some of the non-academic departments, such as speech and commerce, as in most of the academic departments, and lower than in some of them. Moreover, high-ranking groups on the entrance tests almost invariably obtained higher average grades than low-ranking groups even in such departments as music, manual arts, art, home economics, speech and commerce.

4. In every department positive correlations were obtained between group rank and the average grades which the students made in the courses carried during the time of their college attendance. Most of the correlations were significant, but a few were low. The coefficients ranged from .21 to .60.

5. While the women, on the whole, succeeded better than the men in respect to securing a greater proportion of high grades and a smaller proportion of low grades, it cannot be said from the data available that either sex had a disproportionate advantage over the other in any department because of sex or factors peculiar to that sex.

CHAPTER VI.

CONCLUSIONS.

PERSISTENCE IN ATTENDANCE.

The students who enter the Kansas State Teachers College of Emporia exhibit a comparatively small degree of persistence in attendance. It may also be stated that the holding power of the College is small. Entrance-test rank, though significant in predicting academic success, may be relied on but moderately for predicting persistence in attendance. Between entrance-test rank and the percentage graduating, however, a significant relationship exists.

It is true that a large proportion of students enter this college with the express purpose of seeking only a three-year state certificate or a life certificate, obtainable, respectively, by one year's and two years' successful attendance. Nevertheless, mortality in respect to attendance and the resulting wastage to the students and to the college is far too large. When less than 8 percent of those entering as freshmen graduate within four or five years, it is obvious that a very conscious effort might profitably be made to secure greater persistence, especially among students who rank in the upper 50 per cent on the entrance tests.

PREDICTING ACADEMIC SUCCESS.

Academic success may be predicted with a fair degree of certainty by use of a battery of entrance tests. Until tests of much higher predictive value are available, however, no student who wishes to attend college should be deprived of the privilege because of low rank on a battery of tests. The test results may be profitably employed for guidance purposes during high school and college. Most students who come to college need guidance. They should be shown what their chances are of meeting with success in preparation for their chosen vocations.

The test results are very valuable for this purpose, but the average grades these students obtain during the first semester in college are of much greater predictive value. By use of the test results the student likely to have difficulty in meeting academic requirements may be discovered. By apprising him of this fact, in advance, it should be possible to aid him better to meet with success.

The degree to which entrance tests do have reliable predictive value is of vital importance to those attempting to give educational and vocational guidance to students in high school and to the freshmen entering college. While no attempt has been made in this study to determine what vocations low-ranking students in respect to preparation may successfully pursue, it is certain that many should be directed away from vocations in which a high quality of academic efficiency is imperative.

Those who do enter college may be directed more intelligently by use of both the test results and the grades obtained during the first semester.

Occasionally it has been found that the handicap of low rank in prepara-

tion and the accompanying inefficiency in academic success may be overcome by discovering the causes for the deficiency in preparation and remedying the defects. In one such case it was discovered that the student was unable to read with sufficient facility to secure an appreciable amount of the content of the printed page of the text used in an ordinary college subject, even though he devoted many hours to study. During his first semester in college his average grade was D—. In most of his courses he obtained grades of failure. During his second semester in college he was taught to read intelligently. He obtained, during this semester, an average grade of B+. The remainder of his college work was of a high quality, and he graduated from college after four years' attendance. At present he successfully fills a position of responsibility in public education.

Other students ranking low on the entrance tests have likewise been able to overcome their deficiencies and pursue the academic work of the college creditably. Many, however, do not succeed in overcoming their deficiencies; and their academic success fails to improve.

Greater effort should, therefore, be made by the college, through its clinics and its personnel and research departments, to discover the specific handicaps and deficiencies of these students and to assist them in overcoming their handicaps.

Greater effort should probably also be made in college to give these students something of value—work from which they will gain profit—even if they fail to profit from the courses required for certification. For example, if a student of low ability remains in college but one or two semesters without meeting academic requirements for certification, should he not be permitted to pursue work more suited to his interests and capacities? Such work might have more educative value for such a student than the required subjects looking toward certification. A teachers' college, after all, is more than merely a professional school; it is also an educational institution.

It should also be the aim to point these students toward vocations in which they may be successful and happy. To do this successfully obviously demands research studies in vocational success of various levels of mental and academic efficiency.

It is perhaps even more important that students of superior capacities be discovered and their possibilities pointed out to them. Frequently students of very superior capacities, failing to appreciate their talents, aim far too low in respect to vocational choice. By aiding such students to a realization of their abilities and pointing them to more significant vocations than those toward which they may be aiming, both they and society will be benefited.

DEPARTMENTAL DIFFERENCES.

It was found that marked differences exist in respect to the degree to which students of low preparation levels meet with academic success in various departments of the College. The fact that these differences exist is no reflection on any department. Undoubtedly the requirements and the work of some departments are of such a character that true success is more readily obtainable. Moreover, the work of some departments unquestionably has greater appeal and interest for a larger number of students than that of other departments. This may tend to evoke more intelligent effort on the part of those less

efficient in other departments. If this is true, perhaps greater effort should be made to direct low-ranking students on the entrance tests toward the work of the departments more readily suited to their interests and capacities.

Most freshmen undoubtedly come to college with high hopes of meeting with marked academic success. If they meet with inferior success or failure, often because of conditions uncontrollable by themselves, their dreams and aspirations are frequently shattered by disappointment. If they fail in sufficient hours to be deprived from further college attendance, this disappointment is augmented by a wrecked personal and family pride. Because of these conditions, and others previously pointed out, greater effort at intelligent guidance, both in high school and college is imperative.

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