





**EAST CAROLINA TEACHERS COLLEGE  
BULLETIN**

**PROGNOSTIC VALUE  
OF  
HIGH SCHOOL GRADES**

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## FOREWORD

This study, "Prognostic Value of High School Grades," is a discussion of a matter of first rate importance to high schools and colleges. School administrators are interested in the achievements of students in high school and also in college. High school principals are interested in the progress of students after they leave high school and enter college. This study shows that high school grades or judgments of principals and teachers are quite reliable and are indicative of what may be expected in college.

High school grades or marks are not scientifically arrived at in many instances and yet the data in this study indicate high reliability of teacher judgment with reference to the abilities of high school students. It seems to me, however, that administrators and high school teachers should use standardized tests to a greater extent in assigning grades and in making recommendations of or statements about pupils who enter college. Each student should be given at least the following tests:

1. A standardized achievement test.
2. A psychological examination or intelligence test.
3. An aptitudes test.
4. A personality test.

The record of each student should show the results of such tests and this information should be transmitted to the college which any student proposes to enter. This means that the cumulative record of each high school student should show the results of numerous tests, formal and informal, together with all other information available in the case of any student.

It has been the custom in some schools for the principals to recommend students for admission to college. It seems to me that this is putting too great responsibility upon the principal. The principal's obligation is to furnish adequate, reliable information, all that is available, and it is the college's responsibility to accept or to fail to accept on the basis of information supplied. Such study as has been made in "Prognostic Value of High School Grades," will be very suggestive and helpful to high schools and colleges and the author is to be commended for his painstaking study and for a clear statement of the results obtained.

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# PROGNOSTIC VALUE OF HIGH SCHOOL GRADES

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Colleges have long set up certain standards of admission to protect the applicant against the possibility of his wasting his time, efforts, and talents on a task for which he has little adaptability, as well as to protect the college against the possibility of wasting its resources in attempting to instruct those for whom the instruction has little value.

The standards of admission to college have varied from time to time and from college to college. A common standard of admission has been based on the success of the applicant in his secondary school studies; admission has been limited often to those making a certain average grade in high school studies, or to those whose grade average gives them a place above a certain minimum ranking in the high school graduating class.

Colleges justify the setting up of such standards on the grounds that those responsible for administering the affairs of the college cannot approve the expenditure of college funds, public or private, on applicants who give little promise of securing a reasonable measure of profit from the instruction offered by the college, and from the experience of citizenship in a college community. One of the measures of success in college is graduation from the curricula chosen, but the final measure is the success of the student in private and in public life after he has completed his college work.

While it is probable that any youth of approximately average intelligence or even one considerably below average in intelligence might acquire some benefits from a short period of attendance at a liberal arts college, he will be done an injustice by being admitted to college if his record of course failures discourages his seeking further, when he leaves college, a field of activity for which he is better suited and in which he might have been highly successful.

If a college wastes twenty-five percent, or even ten percent, of its resources in attempting to instruct those incapable of profiting adequately from its instruction, it must to that extent reduce the educational values it has to offer those abundantly able to profit by its instruction.

It is not a justifiable excuse for admitting the incapable to say the college needs greater numbers of students to pad its reports to trustees and to the public. It is comparable to saying one must have a new car "to keep up with the Joneses." The American public wants educational advantages for its youth and real personal development in terms of his native abilities for each of its citizens; it is not satisfied with the mere knowledge that Mary Jones attended a certain college for a short time and failed so much of its studies that she was forced to withdraw. The people who support educational institutions want to know that Mary Jones went to college; that she was a worthy and respected member of the college community; that she carried her studies with credit to herself, her parents, her high school and her community, and that she secured a definite training that makes her a more valuable citizen than she was before she went to college.

### **PLAN OF STUDY**

During the summer and early fall of 1939 when applications for admission were being received at East Carolina Teachers College, it was observed that some of the transcripts of high school work received carried very low grades. It was decided to follow the record made in college of a group of these students and compare their accomplishments with that of a similar number of students who had made excellent grades in high school.

A total of sixty-one students whose high school grades were mostly below eighty percent, were selected for the experimental group. A similar number of students entering at the same time whose high school grades were mostly above ninety percent were selected for the control group. The records of the two groups were followed four full college years, ending with commencement exercises on May 31, 1943.

### **STATEMENT OF THE PROBLEM**

Dogmatic generalizations covering the materials in this report might have been made without going to the trouble of gathering data—without a definite knowledge of the facts involved. In fact, a statement to the effect that high school grades are insignificant or entirely untrustworthy as a basis for determining what a student is likely to do when he enters college prompted the study which is being reported here. In order to verify or disprove that statement, it was decided to follow the work of a group of students through four years of college.

The primary purposes of the study were:

- (1) To see whether the grades made in high school are indicative of the grades that are likely to be made in a liberal arts or in a professional college.
- (2) To see whether the size and type of high school from which a student comes determines the quality of success he is likely to have in college.
- (3) To see whether students who make very low grades in high school or those who make high grades in high school are likely to make the better adjustment in college:
  - (a) In scholarship.
  - (b) In tendency to continue in college.
  - (c) In leadership qualities manifested.
  - (d) In quality of citizenship shown in college.

In accomplishing these purposes it was found necessary or expedient to compare the college records of these students in:

- (1) Period of college attendance, and graduation.
- (2) Course grades, grade points, failures, and credit hours earned.
- (3) Choice of majors.
- (4) Honors earned in college, and
- (5) Student Government penalties.

#### **PROCEDURES**

Sixty-one freshmen entering East Carolina Teachers College in the fall of 1939, whose high school transcripts showed a majority of grades in the 70's, were selected for the experimental group. Sixty-one freshmen entering at the same time, who had made high grades in high school, that is around 90 or better, were selected for the control group. These transcripts were selected by inspection only. The purpose of making the selection in this manner was to see whether by mere observation of their high school grades it is possible to forecast with reasonable accuracy, probable success in college. These students did not know their records were the object of a special study; hence, they were under only the normal stimulation of college students to do good work, except that the students in the low group, before this study was planned and before they entered college, had been sent letters stating that their applications for admission to college had been received with transcripts of their high school work; that it was observed their high school grades were rather low; and that it

seemed they would need to give very careful attention to their college work if they were to have a reasonable degree of success in it.

A special mimeographed record form was prepared for each of the 122 students and data were compiled and compared quarter by quarter, and year by year.

### TECHNIQUES

The technique followed is extremely simple—largely a tabulation and comparison by inspection. It was not deemed profitable to use the more involved statistical techniques on such a small number of cases, nor do the data lend themselves to such techniques, except that high school grades could have been correlated with college grades, but by inspection as indicated by the record of grade points in tables I and II, the correlation is high.

The tabulation of attendance, credits, grade-points and failures in tables I and II is intended to give an over-all picture of each group. Totals for individuals and for each year assist in interpreting and comparing records.

The six other tables are less involved and consequently more easily interpreted. They present factual data in support of the several matters under discussion.

### GRADING SYSTEM USED

This college uses for its grading system the figures 1, 2, 3, 4, and 5, in which "1" is the highest grade given, "4" the lowest passing grade, and "5" is a failing grade. In weighting these grades to calculate scholarship standing, the following grade-point values are given for each credit hour carried by the course on which the grade is made:

Grade "1"—3	grade	points	a	credit	hour
Grade "2"—2	"	"	"	"	"
Grade "3"—1	"	"	"	"	"
Grade "4"—no	"	"	"	"	"
Grade "5"—1	"	"		deducted	for the course

Mathematically, this does not give exactly a grade average of "3" or "C", since only one grade point is deducted for a course failed. To give a mathematical average of "3" with this plan, it would be necessary to deduct one grade point for each credit hour failed, hence the scholarship records of students in this study who made failures seem to be higher than they actually are in comparison with students who made no failures on courses.

Under this plan of grade weighting, a student is considered as having a grade average of "3" or "C" when he has as many grade points as he has quarter hours of college credit—but if he has made failures his actual average will be less than "3" or "C" when he has a one-to-one ratio of grade-points and credit hours.

#### RECOMMENDATION FOR COLLEGE ADMISSION

The high school transcript form used by this college has a space in which the high school, through its proper officers, may recommend or refuse to recommend its graduates for college admission.

All of the students in the high group concerned in this study were recommended for college admission, and fifty-one of those in the low group were so recommended. On only three of the transcripts was the recommendation definitely "no". Two of those three students dropped out of college at the end of the first year, and the third one dropped out at the end of two years of college work. Each of them did a poor grade of college work. Four of the transcripts carried no recommendation either way.

On one of the transcripts the principal said the student could do college work, but at the end of 12½ quarters (a half-quarter more than the normal time required for graduation) that student had earned only 160 of the 190 quarter hours required for graduation and had earned about two-thirds of the number of grade points required to give the necessary scholarship average for graduation.

On another transcript the superintendent made the notation that the student was "slow". That student graduated in the normal time with barely the scholastic average required for graduation. The student had failed only one course.

On another transcript the superintendent said he had "misgivings" about the student's doing college work. That student remained in the college three years, made five failures, and had a low scholarship average at the time she dropped out of college.

Still another transcript carried the notation that the student's attitude rather than his scholarship might be the factor determining whether the student would adjust himself satisfactorily in college. That student made no failures in college courses, and had barely an average in scholarship grades; he entered the summer session after four full years of college attendance with the expectation of graduating, in the extra quarter, at the close of the summer session 1943.

## HIGH SCHOOLS

The size and the location of high schools from which these students came seem to have had little to do with their scholarship in college, and little to do with their adjustment to campus and community life.

Members of the high group came from 45 different high schools; members of the low group came from 36 different high schools. Since most of the students in each group came from rural or village communities (there are few large cities in eastern North Carolina from which they might have come), their social background must have been reasonably similar; their pre-college educational experience could not have been greatly dissimilar; and since all except one were residents of North Carolina, the total number of months of schooling these students received in the elementary and high schools must have been practically the same.

Eighteen of these students, five from the low group and thirteen from the high group, came from the cities of Wilmington, Raleigh, Kinston, Greenville, Rocky Mount, Wilson and Washington. Of the five from the low group only the student from Washington made an outstandingly high scholarship record. Each of the thirteen students from the high group had a good to excellent scholarship record in college.

This leaves 48 members of the high group who came from rural and, in many instances, small high schools; yet not a single member of the high group failed to make an entirely satisfactory scholarship record in college. Not one had less than average grades in college. The group as a whole earned 1.8 grade points for each credit hour passed. This would be a little less than the average grade of "B" in the grading system used by some colleges—"2" in the grading system used by this college.

The low group, by comparison, earned only 0.81 of a grade point for each credit hour passed. Two students in the low group, one from Jacksonville and the other from Willow Springs, were graduated with scholarship records that would be called good. Only three of the students from this group who dropped out of college after a short period of attendance had a scholarship record in college that was above average.

Generally only one or two students came from any one high school, but in one instance five and in another six of the low group came from the same high school, each of which was classified as a city high school. Two members of the high group came from the same high school as the six who were in the low group.

In another instance three of the low group and four of the high group came from a city high school that is a member of the Southern Association of Colleges and Secondary Schools.

Here is the record of the three from the low group:

Student No. 17\* withdrew during the fall quarter of the freshman year; he returned the second year and had a scholarship ratio of 10 grade points to 34 credit hours earned with three failures.

Student No. 54 stayed in college two years and had a scholarship ratio of 38 grade points to 85 credit hours earned and 5 failures.

Student No. 56 attended college two quarters, earned only 12 grade points, 16 credit hours, and made three failures.

The record of the four members of the high group coming from the same high school is:

Student No. 23\*\* stayed in college one year, earned 82 grade points and 48 credit hours.

Student No. 28 attended college three regular years and three summer sessions; he graduated with 288 grade points and 190 credit hours—a superior student.

Student No. 33 stayed in college only one year and earned 71 grade points and 41 credit hours.

Student No. 56 stayed in college one year, earned 110 grade points and 45 credit hours.

Only eight high schools furnished members of both the high group and the low group concerned in this study. In four cases one member of each group came from the same high school.

In another instance one of the low group and two of the high group came from the same high school.

In another, two from the low and one from the high group.

In another instance, three from the low group and four from the high group. Their record is given above.

In another, six from the low group and two from the high group.

In all, 16 from the low group and 13 from the high group came from the eight high schools.

In every case the student with the good grades in high school made good to excellent grades in college, and the students with poor grades in high school, except four, made poor or below average grades in college. Those four graduated with barely average grades, and two of them took an extra quarter to meet graduation requirements.

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\*See Table II.

\*\*See Table I.

The scholarship ratio of the 13 members of the high group that came from these eight high schools was 3,266 grade points earned to 1,888 credit hours earned, which is nearly a "2" or "B" average.

The scholarship ratio for the 16 members of the low group that came from the same eight schools was 1,179 grade points earned to 1,571 credit hours earned. This is much below a "3" average.

It is seen that 13 members of the high group made nearly three times as many grade points and one-fifth more credit hours than did the 16 members of the low group who received their training in the same high schools and at the same time.

The facts given above indicate that the length of school term in his pre-college education did not determine the student's scholarship rank in college.

### SCHOLARSHIP

The scholarship record of the high, or control, group showing the grade points, credit hours, and number of failures made year by year, and the totals, is found in Table I. Forty-seven members of this group were in college during the fourth year and 41 of them were graduated with the Bachelor's degree by the end of the fourth year. Two of them, students Nos. 13 and 28, were graduated in three years. This was accomplished by their attending summer sessions. Two more of them are scheduled to be graduated at the end of the summer session, 1943.

It should be explained that in this table, summer session credits were carried over and recorded in the space reserved for the fourth year's credits. This was done in order to keep intact the credits earned respectively in the first, second and third regular college years.

It will be observed that in the four years, these 61 students had only 32 individual course failures and that the average grade was 2.25, which is  $\frac{3}{4}$  of a grade point better than an average of "3"; or  $\frac{1}{4}$  of a grade point under a grade of "2" according to the grading system of this college; or a little under an average grade of "B", according to the system used by some other colleges. Not a single individual in this group made less than average grades as a whole during his college attendance. It is striking that so large percentage of this group continued in college for the full four years. The percentage is considerably higher than that for the general enrollment in this college, which is approximately 50%; that is, approximately 50% of those who enter, continue through to graduation.

The highest number of failures made by this group was during the third year; the lowest number was during the second year. The largest number of withdrawals from this group was at the end of the freshman year when nine of them gave up college work here; five withdrew at the end of the second year; three withdrew at the end of the third year. Three of those who withdrew from college returned later to continue their college work.

Even a casual comparison of Table I and Table II shows very definitely that the members of the low group had a much smaller total amount of time in college attendance than the high group and that its total scholarship as well as its individual scholarship was very much lower than that of the high group.

Under a strict mathematical application of the grading system adopted by this college, the lower group earned only 0.58 of a grade point for each credit hour attempted; that is, for each credit hour included on the student's course schedule at the beginning of the quarter.

If, as is the practice in this college, the student is charged with a reduction of only one grade point for each failure, this group then could be said to have earned 0.65 of a grade point for each credit hour attempted.

Again, deducting only one grade point for each course failure and basing the calculation on the number of credit hours earned, this group can be said to have earned 0.81 of a grade point for each credit hour actually earned by his securing at least a passing grade on the course.

Thus, it is seen that by each one of these plans of calculation, this group made much less than average grades on the college work scheduled and on the college work passed as well.

Only eleven of the group made better than mathematically average grades—one had exactly a mathematical average; and of the eleven, only eight were enrolled in the college after the third year. Three of the group made praiseworthy scholastic records: that is, students nos. 8, 35, and 50. Student No. 35 graduated in three years by attending summer sessions and made a grade point-credit hour ratio of 396 to 190.

The question naturally arises, "Why should a student who made a very poor scholastic record in high school make such a high scholastic record in college?" During the freshman year it was observed that this student was making unusually good marks and a conference was held with him to get an explanation. He stated very simply that he was not interested in attending high school and did so only because it was expected of him (from

TABLE I. GRADE POINTS, CREDIT HOURS AND FAILURES

HIGH GROUP

STUDENT NUMBER	First Year			Second Year			Third Year			Fourth Year			Total		
	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's
1**	107	48	0	138	54	0	119	54	0	60	34	0	424	190	0
2*	97	48	0	99	51	0	113	48	0	84	45	0	393	192	0
3	86	48	0	78	54	0	21	39	3	40	43	1	225	184	4
4*	114	48	0	112	53	0	74	47	0	65	44	2	365	192	2
5	63	48	0	61	48	0	27	48	3	-----	-----	-----	151	144	3
6*	63	48	0	88	47	0	77	49	0	51	51	0	279	195	0
7*	71	48	0	69	51	0	57	50	0	61	47	0	258	196	0
8*	64	48	0	51	51	0	45	47	0	63	47	0	223	193	0
9	96	48	0	87	42	0	-----	-----	-----	-----	-----	-----	183	90	0
10	84	48	0	86	49	0	36	15	0	-----	-----	-----	206	112	0
11*	71	48	0	94	51	0	70	50	0	72	45	0	307	194	0
12	105	48	0	92	48	0	-----	-----	-----	-----	-----	-----	197	96	0
13***	103	49	1	110	54	0	75	45	0	77	45	0	365	193	1
14*	73	50	0	79	47	0	81	48	0	72	49	0	305	194	1
15*	103	48	0	90	45	0	99	47	0	99	51	0	391	191	0
16*	70	47	0	47	50	0	31	49	3	53	48	1	201	194	4
17**	119	48	0	109	51	0	119	51	0	129	62	0	476	212	0
18*	74	48	0	50	50	0	55	50	0	72	45	0	251	193	0
19*	63	48	0	84	48	0	96	49	0	79	45	0	322	190	0
20*	103	48	0	129	54	0	112	51	0	90	42	0	434	195	0
21*	110	48	0	142	51	0	113	46	0	87	45	0	452	190	0
22	104	51	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	104	51	0
23	82	48	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	82	48	0
24*	79	48	0	66	45	0	67	47	0	87	50	0	299	190	0
25*	98	48	0	116	51	0	99	48	0	83	47	0	396	194	0
26	48	22	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	48	22	0
27*	105	48	0	117	51	0	129	49	0	94	44	0	445	192	0
28*	114	42	0	72	52	1	63	47	0	39	49	0	288	190	1
29**	106	48	0	60	43	0	89	48	0	74	53	0	329	192	0
30	90	46	0	78	44	0	-----	-----	-----	-----	-----	-----	168	90	0
31	67	48	1	61	33	0	85	47	1	-----	-----	-----	213	128	2
32*	85	48	0	90	47	0	89	48	0	60	47	0	324	190	0
33	71	41	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	71	41	0
34*	104	48	0	90	47	0	86	48	0	68	47	0	348	190	0
35**	88	48	0	82	48	0	58	49	1	86	48	0	314	193	1
36*	153	51	0	132	47	0	116	48	0	112	50	0	513	196	0
37*	84	49	0	78	49	0	87	48	0	64	46	1	313	192	1

STUDENT NUMBER	First Year			Second Year			Third Year			Fourth Year			Total		
	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's
38	38	29	0										38	29	0
39	94	48	0	83	43	0	70	50	0	41	34	0	288	175	0
40*	84	48	1	62	45	0	79	51	0	59	46	0	284	190	1
41*	116	48	0	116	54	0	117	50	0	76	47	0	425	199	0
42*	115	48	0	111	54	0	78	49	0	71	43	0	375	194	0
43*	85	48	0	98	47	0	101	48	0	81	47	0	365	190	0
44	75	49	0										75	49	0
45*	87	48	0	87	49	0	58	47	1	72	46	0	304	190	1
46	148	50	0	87	39	0							235	89	0
47**	68	48	0	91	49	0	89	48	0	90	51	0	338	196	0
48*	68	48	0	53	43	0	42	48	1	73	53	0	236	192	1
49*	84	49	0	64	47	0	59	46	2	75	53	1	282	195	3
50*	85	48	0	85	52	0	62	48	1	72	47	0	304	195	1
51	81	47	1										81	47	1
52*	101	47	0	103	51	0	97	48	0	70	44	0	371	190	0
53*	71	48	0	46	48	0	53	48	1	52	47	0	222	191	1
54	135	49	0	161	52	0							296	101	0
55*	91	48	0	101	50	0	55	47	1	90	53	0	337	198	1
56	110	45	0										110	45	0
57**	96	48	0	87	48	0	69	50	0	101	53	0	353	199	0
58*	72	48	0	73	47	0	66	45	1	77	50	0	288	190	1
59	65	46	0	43	32	0	42	33	1	70	43	0	220	154	1
60*	117	50	0	101	50	0	83	50	0	66	42	0	367	192	0
61	69	46	0										69	46	0
Totals	5,472	2,875	4	4,589	2,506	1	3,608	2,216	20	3,257	2,068	9	16,926	9,665	32

\* Graduated with Bachelor's degree, May 31, 1943.

\*\* Graduated with Bachelor's degree, March, 1943.

\*\*\* Graduated with Bachelor's degree in three years by attending summer sessions.

TABLE II. GRADE POINTS, CREDIT HOURS AND FAILURES

LOW GROUP

STUDENT NUMBER	First Year			Second Year			Third Year			Fourth Year			Total		
	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's
1	9	39	4										9	39	4
2	28	36	2	33	51	0	47	45	1	21	19	1	129	151	4
3	23	45	2	31	46	1	18	46	3	66	32	2	138	169	8
4	1	37	4										1	37	4
5	-1	35	4	15	38	5							14	73	9
6	46	45	0	11	14	0							57	59	0
7	48	45	1	81	48	0	41	44	2				170	137	3
8*	55	48	0	85	51	0	75	47	0	44	45	0	259	191	0
9	-2	28	4										-2	28	4
10	-5	40	7										-5	40	7
11	17	27	2	5	12	1	7	18	2				29	57	5
12	7	28	3										7	28	3
13	51	42	0										51	42	0
14	33	43	1										33	43	1
15	10	45	4										10	45	4
16	30	42	4	1	12	2							31	54	6
17				10	34	3							10	34	3
18	1	15	2										1	15	2
19	14	43	4										14	43	4
20	37	47	1	36	34	1	16	16	0				89	97	2
21	-4	39	8										-4	39	8
22	-4	16	4										-4	16	4
23	12	43	2										12	43	2
24	22	45	0	32	31	0	45	48	1				99	124	1
25	33	44	1	18	33	3	33	42	3	83	54	1	167	173	8
26	13	31	2	23	35	3	19	39	4	54	53	1	109	158	10
27	44	44	0										44	44	0
28	2	42	4										2	42	4
29	4	39	3	48	47	3							52	86	6
30	12	38	2										12	38	2
31	44	49	0	38	48	0	6	45	4	34	31	0	122	173	4
32	9	38	4										9	38	4
33	19	38	2	20	34	2	20	42	2	27	39	2	86	153	8
34	9	40	4	16	46	5							25	86	9
35†	121	54	0	110	49	0	60	32	0	105	55	0	396	190	0
36	23	41	5										23	41	5
37	26	41	2	29	43	2	58	49	0				113	133	4

STUDENT NUMBER	First Year			Second Year			Third Year			Fourth Year			Total		
	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's
38	10	29	4	17	29	2	17	33	2	27	46	1	71	137	9
39	8	15	1										8	15	1
40	20	45	3	7	42	3							27	87	6
41	52	47	0	48	44	1	30	41	1	59	46	3	189	178	5
42*	19	45	1	36	48	0	40	47	1	60	43	0	155	183	2
43	11	46	4										11	46	4
44*	19	48	1	40	42	0	63	48	0	80	56	0	202	194	1
45	15	43	2										15	43	2
46	40	48	0	43	50	0	44	49	0	43	41	0	170	188	0
47	20	45	1	43	47	0	36	43	4				99	135	5
48*	48	48	0	45	46	0	49	48	1	61	58	1	203	200	2
49	8	16	0										8	16	0
50*	59	48	0	77	47	0	63	46	0	53	53	0	252	194	0
51	3	16	2										3	16	2
52	22	45	5										22	45	5
53	1	31	2										1	31	2
54	27	45	3	11	40	2							38	85	5
55	41	48	0	23	35	3	16	39	6	22	48	4	102	170	13
56	12	16	3										12	16	3
57*	40	48	0	32	43	1	44	49	1	73	52	0	189	192	2
58	13	16	1										13	16	1
59	52	48	0										52	48	0
60*	42	48	0	54	49	0	51	49	0	55	44	0	202	190	0
61	33	48	0	56	45	0	58	48	0	43	46	0	190	187	0
Totals	1,402	2,344	125	1,174	1,313	43	956	1,053	38	1,010	861	16	4,542	5,571	222

\* Graduated with Bachelor's degree, May 31, 1943.

\*\* Graduated with Bachelor's degree, March, 1943.

† Graduated with Bachelor's degree in three years by attending summer sessions.

### SUMMARY OF SCHOLARSHIP AND CREDITS EARNED

STUDENT GROUP	First Year			Second Year			Third Year			Fourth Year			Total		
	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's	Pts.	Hrs.	5's
High	5,472	2,875	4	4,589	2,506	1	3,608	2,210	20	3,257	2,068	9	16,026	9,065	32
Low	1,402	2,344	125	1,174	1,313	43	956	1,053	38	1,010	861	16	4,542	5,571	222

which we may gather that there was at least minor compulsion), but that in college he had a very definite goal in mind, something very definite to work for, and that, as a consequence, he was giving his very best efforts to his college work. This student was somewhat above the usual age for college admission. In fact, two or three years had elapsed after he graduated from high school before he entered college.

With most of the students in the low group, it seems evident they were working as nearly up to their capacity as most students do, for there was little improvement in their scholarship ratio; for example, student No. 33 had a scholarship ratio the first year of 19 to 38; in the fourth year, he had a scholarship ratio of 27 to 39; his total scholarship ratio for the four years was 86 to 153, with a total of eight failures. Again student No. 38 had a scholarship ratio the first year of 10 to 39, the fourth year of 27 to 46, and a total scholarship ratio of 71 to 137 for the four years, with nine failures. Student No. 61 had a scholarship ratio the first year of 33 to 48. This was raised a bit during the sophomore and junior years, but it dropped back during the senior year to 43-46; it was only a small fraction above average, that is 190 to 187 at the end of the four years. This student is attempting to complete the requirements for graduation by attending a summer session at the end of the four years.

#### **TOTAL COLLEGE ATTENDANCE**

A casual inspection and a comparison of Tables I and II indicate at a glance that the high group persisted in college attendance to a greater extent than did the low group. That fact is emphasized more definitely in the figures given below. Since this college operates on the quarter plan, and since there were 61 students in each group, if all members of each group had attended the full time, each group would have had a total attendance record of 183 student quarters a year. During the freshman year the high group had a total of 180, or three student quarters under the maximum possible in college attendance. The low group, on the other hand, had only 161 student quarters in attendance, or 22 student quarters under the maximum possible. There was a more drastic reduction in the number of student quarters of attendance during the second year for each group, but the greater reduction was in the low group.

TABLE III

	Possible	Actual			
		High Group		Low Group	
		Student Quarters	Percent	Student Quarters	Percent
1st year	183	180	98.4	161	88
2nd year	183	154	84.2	91	49.2
3rd year	183	138	75.4	71	38.8
4th year	183	131	71	58	31.7
Total	732	603	82.4	381	52.05

NOTE: 61 (Students) x 3 (Quarters) = 183 possible student quarters of attendance a year x 4 (Years) = 732 possible student quarters of attendance in four years.

During the senior or fourth year, the high group made a total of 131 student quarters in attendance, or 52 student quarters short of the maximum possible. On the other hand, during that year, the low group made only a total of 58 student quarters in attendance, which was 125 student quarters short of the maximum possible.

For the full four years, the high group had a total of 603 student quarters in attendance, which was 82.4% of the 732 maximum student quarters of attendance possible. The low group, on the other hand, had only 381 student quarters in attendance for the four years, which was 52.05% of the total attendance possible. Table III breaks down student quarters of attendance by years for each group.

## GRADUATION

Two members of the high group were graduated in June 1942, which was only three calendar years from the time of their admission to college, but by taking summer sessions, they made up the extra three quarters and were graduated in the usual twelve quarters. Six shortened their graduation by one quarter and graduated in March 1943 by attending a full summer quarter. Thirty-three were graduated in June 1943 after having attended twelve regular quarters. Two more were graduated in August 1943, one because of some irregularity in her schedule that necessitated her taking an extra quarter, and the other because of her desire to take particular elective courses to add to her equipment as a college graduate. Thus 41 (67.2%) of the high group were graduated by the end of the four normal college years

required for graduation, and two more, making a total of 43 of the 61 in this group, were graduated by August 1943. It is quite certain that one other student who dropped out of college for a year will return to graduate next year, and is it probable that another who dropped out during the college year 1942-43 will return to complete the requirements for graduation. If they do, that will make a total of 45 (73.7%) of this group to graduate.

In the low group, one was graduated in March 1942, having taken eleven quarters to complete the requirements for graduation, and seven were graduated in June 1943, but five of the seven had found it necessary to attend one or more summer sessions to do so. Thus eight (13.1%) were graduated within four calendar years, but only 3 (5%) met the requirements for graduation within the normal twelve quarters. Four more were graduated in August 1943 after taking  $12\frac{1}{2}$  to 14 quarters to do so. A total of twelve (19.6%) of the 61 members of the low group were graduated by August 1943. There is little probability that any other members of this group can or will meet the graduation requirements.

As to the time required to graduate, in the high group one took  $11\frac{1}{2}$  quarters; 37 took 12 quarters; one took  $12\frac{1}{2}$  quarters; and two stayed in college 13 quarters. In the low group, one graduated in 11 quarters; 2 in 12 quarters; 6 took  $12\frac{1}{2}$  quarters; 2 in 13 quarters and 1 in 14 quarters. One other member of the low group has already been in college  $13\frac{1}{2}$  quarters and another, 14 quarters. There seems little prospect that these last two students will meet graduation requirements.

#### WITHDRAWALS FROM COLLEGE

The difference in the number of withdrawals from college by members of the two groups was apparent from the time of their admission in the fall quarter 1939. Many more members of the low group withdrew from college than was the case with the membership in the high group. This can be readily seen by an inspection and comparison of Tables I and II. In the fourth year only 17 members of the low group still remained in college, while 43 members of the high group were still in college.

An inquiry was addressed during the spring of 1943 to all students under consideration in this study who had dropped out of college, asking their reasons for dropping out of college.

Replies were received from 38; 22 did not reply. The reasons given are indicated below under the number given the student in this study. Seven replied that they entered business school,

leaving the impression, or attempting to leave the impression, that this was the reason for dropping out of college. Six of these were in the low group. Whether they entered business school immediately after withdrawing from this college is not apparent.

Of those who did not reply from the low group, at least one failed to pass the required number of credit hours to return and each of the others was making a very low scholastic record.

Of the members of the high group who withdrew from this college, at least six entered other academic and professional colleges. Two entered business schools; two secured secretarial jobs later, and four reported that they had married.

Seven of the low group and four of the high group left college to get married or did so before the end of the period covered by this study. It is probable that there was some evasion and that the real reason for the withdrawal was not, in all cases, correctly given.

The reasons most frequently given were:

**TABLE IV**

Did not have enough money-----	9
Did not like college work-----	1
Had a poor foundation in high school-----	1
Did not like this college-----	1
Personal illness -----	2
Got married -----	6
Entered another college-----	3
Entered business school-----	7
Voice handicap -----	1
Discouraged by failures-----	1
Got a secretarial job-----	3
Entered armed forces-----	3

### WHY STUDENTS LEAVE COLLEGE

**TABLE V**

STUDENT	LOW GROUP
No.	
4	Got married
6	Sick
7	Voice handicap not suitable to teaching; going to business college
13	Not enough money
14	Entered business school
15	Got married; did not like college; poor high school foundation
17	Entered a small college
18	Not agreeable roommate assignment; got married
19	Entered business school; not enough money; got married
20	Entered military service
23	Got married

- 24 Sickness, personal; not employed; planning to get work
- 27 Got a secretarial job; got married; still working
- 28 Not enough money; poor high school foundation; working in dentist's office
- 30 Entered commercial school; secured secretarial employment
- 32 Not enough money; poor high school foundation; went to business school; has secretarial job
- 36 Entered business school; has secretarial job
- 37 Entered military service
- 38 Sickness; appendicitis
- 40 Not enough money; poor high school foundation; working defense job
- 41 Not enough money; in training for nursing
- 46 Withdrew temporarily and returned to E. C. T. C.
- 47 Disgruntled at a teacher who had given a failure
- 53 Discouraged at failures; got married
- 54 Entered military service
- 58 Got a job
- 59 Not enough money; in training for nursing

#### HIGH GROUP

- 5 Got married
- 9 Not enough money; entered Air Corps
- 10 Got married to man in military service
- 12 Entered business school; has secretarial job
- 22 Not enough money
- 31 Got married; now unemployed
- 33 Entered engineering school
- 38 Entered engineering school
- 46 Got married
- 54 Entered medical school; now medical technologist
- 56 Entered military service
- 61 Secured secretarial job

#### STUDENT MAJORS

A check was made of the major fields of study elected by the 122 students concerned in this study to see whether there was a tendency for a student to be influenced in the selection of his major by his own estimation of his personal characteristics and abilities with special reference to the quality of his scholarship in high school. The tabulation below gives the major fields chosen by these students.

There was a tendency for students of the low group to elect majors in which a considerable amount of manual skill is employed, and a tendency for the members of the high group conversely to choose a major field in which a high degree of academic scholarship is needed.

It is noticeable that nearly twice as many of the low group chose the primary curriculum as there were members of the high

group electing this field of preparation, and nearly twice as many members of the high group chose the grammar grade as did members of the low group. More than three times as many of the high group chose mathematics as did those in the low group; more than four times as many chose English. This seems to indicate that the members of each group had some knowledge of their own capabilities and that they chose their majors accordingly. Except in the fields of primary and grammar grade education, students in this college usually elect two majors, hence in the tabulation below these double majors are included.

**TABLE VI. CHOICE OF MAJORS**

	HIGH	Low
Commerce -----	13	19
Physical Education -----	2	6
Home Economics -----	11	14
Primary -----	7	13
Grammar -----	11	6
English -----	13	3
Mathematics -----	10	3
History -----	8	4
Science -----	12	11

**SUMMER SCHOOL ATTENDANCE**

Members of both the low and the high groups attended summer school in several instances; however, members of the high group seem to have a better reason for summer school attendance than the low group. Several members of the high group attended summer sessions in order to hasten graduation; two of them hastening it by a full year; some hastened graduation by two quarters, and others hastened it by one quarter.

One member of the high group attended summer school merely to get certain courses in which she was interested and to secure the additional training. Another of the high group attended an extra quarter for this purpose.

It seems manifest that most of those in the low group who attended summer sessions did so in the hope that they might improve their grade standing and thus justify their attendance in college. A further purpose in their attending the summer session was to accumulate the credit hours needed to keep up with their classmates since by failures and by being required to take lighter schedules, they were falling behind in the total number of credit hours required to qualify for the advanced classification.

One member of the low group was graduated in three years and three summer sessions. This was student No. 35, an unusual case, which has been mentioned previously in this report.

#### CLASS HONORS AND CLUB MEMBERSHIPS

Members of the high group secured many more honors by way of class offices and positions of responsibility than did members of the low group. The high group likewise had a larger representation in club memberships as shown in Table VII. Only one member of the low group held any official position in a class or group; that was the position as club secretary-treasurer. Thirty-nine members of the high group held such offices; one as class president, another as class vice-president, 12 as club presidents, and 12 as club vice-presidents. Nearly three times as many of the high group as of the low group were members of the Young Women's Christian Association. Twelve members of the high group were chosen for the honor of Who's Who in Colleges, but no member of the low group was given this honor.

TABLE VII. CLASS HONORS AND CLUB MEMBERSHIPS

	HIGH	Low
Class president -----	1	--
Class vice-president -----	1	--
Class secretary -----	1	--
Club president -----	12	--
Club vice-president -----	13	--
Club secretary-treasurer -----	11	1
Dormitory proctor -----	3	1
Y. W. C. A. members -----	30	11
"Y" Cabinet -----	3	--
Student Government Association	11	--
Publications Board -----	1	--
Marshal -----	5	--
Senior Superlative -----	4	--
Who's Who in College -----	12	--
Tecoan Staff -----	4	1
Reporter, College Paper -----	4	--
Editor, College Paper -----	1	--
Club memberships -----	111	39
	<hr/>	<hr/>
Totals -----	225	53

#### STUDENT GOVERNMENT PENALTIES

One measure of a student's citizenship in the college community is the record of his appearance before the Student Government Council, when called before that body on some

charge of misconduct or infraction of regulations, and of the penalties inflicted on him. This is a negative significant measure.

The most common infraction, for which penalties are imposed, is returning to the campus and signing in after the time set for the return. Slight tardiness or tardiness with good excuse is a minor infraction.

The comparative record of the two groups of students under consideration with respect to penalties imposed is found in Table VIII where, it will be observed, 19 individuals of the high group received during the four years a total of 26 penalties; 17 of these were minor infractions entailing a restriction of privileges for a period of one week or less. In only seven instances did members of this group receive a penalty restriction of as much as three weeks. In the low group during the four years, 20 individuals received a total of 50 penalty restrictions, of which 22 were for periods of one week or less. Eight of the 50 were rather severe penalties, ranging from a one-month restriction of privileges to suspension.

The comparison is more striking when it is explained that the larger number of withdrawals from college were from the low group and that this group had only approximately five-eighths as much total attendance time in college as the high group. There seems to have been a definite tendency for students of low scholarship to offend more frequently against college regulations and against principles of good college citizenship.

Practically all penalties are imposed by the Student Council which is the governing body elected by the students themselves.

**TABLE VIII. STUDENT GOVERNMENT PENALTIES**

RESTRICTION:	HIGH GROUP (19 individuals)	LOW GROUP (20 individuals)
Warning -----	1	1
Less than one week -----	1	2
One week -----	16	20
10 days -----	1	6
2 weeks -----	—	4
3 weeks -----	7	9
One month -----	—	1
One quarter -----	—	1
Indefinite -----	—	4
Probation -----	—	1
Suspended -----	—	1
Totals -----	26	50

## SUMMARY

The difference in the accomplishment of the members of the two groups was apparent from the first quarter of their college attendance.

For example, the low group failed 125 different courses during the first year while the high group failed only four. The low group failed 222 courses during the four years while the high group failed only 32.

It seems highly significant also that the high group had a scholastic ratio of 5,472 grade points earned to 2,875 credit hours earned in the freshman year, while the low group had a scholarship ratio of 1,402 grade points earned and 2,344 credit hours earned in that year.

Comparable accomplishment for the second year was 4,589 grade points to 2,506 credit hours earned by the high group and 1,174 grade points earned to 1,313 credit hours for the low group.

While there was some improvement by the low group, as might be expected, only a small number of the low group made better than average grades.

Of the 17 members of the low group enrolled in college during the fourth year only seven had average scholarship grades or better. Five of the seven had barely average grades. One of this group graduated in three years.

Of the 43 members of the high group in college during the fourth year, all had better than average grades; one had slightly above average grades; all others had good to excellent grades.

The high group excelled in honors attained and had a better citizenship record.

There was a tendency for members of the high group to select the traditional academic majors such as English, history, mathematics; and members of the low group to select majors that are thought to call more strongly on manual skills; there was a tendency, among those electing elementary school teaching, for good students to elect the grammar curriculum and poor students to select the primary curriculum.

## CONCLUSIONS

1. The results of this study indicate that the grades given in North Carolina high schools are comparable to the grades given at East Carolina Teachers College to students of similar ability and similar accomplishment.

2. High school grades are highly significant of the type of accomplishment the student is likely to achieve if he attends a liberal arts or professional college.
3. Students who have a high grade average in high school are quite certain to carry college work successfully and according to the results of this study, they are six times as likely to graduate from college as those with a very low grade average in high school.
4. There are only two chances in 62 or one chance in 31 that the student with very low grades in high school will make outstanding grades in college; about an even chance, that is, 27 in 62, that he will stay in college only one year; about one chance in nine that he will graduate in the normal time; about one chance in seven that he will graduate at all.
5. Students who enter an academic or professional college after having made a very low grade average in high school are likely to:
  - (a) Drop out of college before graduation
  - (b) Make less than average grades to very poor grades
  - (c) Secure few student honors or positions of responsibility in student organizations
  - (d) Make a relatively poor adjustment to college life and to college regulations
  - (e) Waste time in attempting tasks that are beyond their capabilities or for which they are ill-suited.
6. Recommendations for admission to college are often given inadvisedly by high school principals and superintendents to students who have small chance of doing successful college work.
7. A college assumes a heavy burden in admitting and attempting to instruct students who are not adapted to the curricula and the type of learning it has to offer.

### **RECOMMENDATIONS**

1. High schools should give more careful vocational counselling to members of their graduating classes who contemplate attending college. These students should be made aware of their native abilities, their personal limitations, and their best probable choice of vocation.
2. High school seniors should not be recommended for admission to a type of training (or college) in which they have small chance of achieving at least fair success.

3. Colleges should set up procedures, such as intelligence, achievement, vocational, personality, and academic tests, coupled with personal conferences to determine eligibility for admission to the curriculum and the type of training each has to offer.
4. No prospective student should be admitted until the college has assured itself that the applicant is capable, from every standpoint, of taking the training it has to offer and of getting value received for the time, money, and effort given while attending the college, and that he has a reasonable prospect of completing the course of study contemplated.
5. When a student is admitted to a college he should be given such encouragement, stimulation and direction as to encourage his best accomplishment in the course of training undertaken; he should not be looked upon as just another measure of grist in the mill.













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