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An Actuarial Study of the Relationship of Grades Earned in Certain High School Subjects and Curricula to Academic Success in College, and the Efficiency of Counselor Prediction of College Success

Leotta R. Hampton

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AN ACTUARIAL STUDY OF THE RELATIONSHIP OF GRADES
EARNED IN CERTAIN HIGH SCHOOL SUBJECTS AND
CURRICULA TO ACADEMIC SUCCESS IN COLLEGE,
AND THE EFFICIENCY OF COUNSELOR
PREDICTION OF COLLEGE SUCCESS

By
Leotta R. Hampton

A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Science at South Dakota
State College of Agriculture
and Mechanic Arts

August, 1958

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This thesis is approved as a creditable, independent investigation by a candidate for the degree, Master of Science, and acceptable as meeting the thesis requirements for this degree; but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.
ACKNOWLEDGEMENTS

For guidance and assistance in developing and completing this study, the writer is especially indebted to Mr. Gerald M. Fort, Associate Professor of Student Personnel at South Dakota State College. His invaluable aid is hereby gratefully acknowledged.

Much of the statistical work for this study was carried on with the cooperation of Mr. David Whiteside, Director of Guidance, and Mr. Valjean Cashen, Coordinator of Testing, at Township High School District 214, Arlington Heights, Illinois. For their assistance the writer wishes to express her sincere gratitude.
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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS

The Problem. Secondary schools have long had as one of their objectives the preparation of college-bound students for more effective academic performance at the college and university level. Development of specific courses for that purpose has led to considerable discussion concerning their merits compared with general curriculum courses in the same subject matter areas.

In this age of astounding scientific development, as evidenced by Sputniks, Explorers, and Vanguards, it is not only appropriate but expedient that national and local attention be focused upon our educational system in an attempt to evaluate it and to institute long-range plans for greater efficiency in meeting the needs of our society. In a high school in which an increasing percentage (well above the national average) of graduates enroll for further academic training, it becomes increasingly important to evaluate the college-preparatory program.

This study does not imply that other curricula in the high schools should be ignored or their importance minimized, but it is limited to a consideration of the records of those who were enrolled in a college or university in the academic year immediately following their graduation from high school. Present plans indicate that
this study is the first in a series of studies designed
to evaluate college-preparatory, general, and vocational
programs.

Selected as the sample for critical evaluation was
the graduating class of 1956 at Township High School
District 214 in Arlington Heights, Illinois, of which a
more complete description will be found in Chapter III.

In this study an attempt was made to review critica-
ally the relationship of grades earned in certain high
school subjects to academic success in college. Subjects
selected were American history and English IV, since
special college-preparatory sections of these two courses
have been devised for and required of all students grad-
uating in the college-preparatory curriculum at Township
High School District 214.

The purpose of a second portion of this study was
the measuring of the efficiency in the prediction of
college success of those two counselors whose special
responsibility is recommendation of students to colleges
and universities. In this school, as in many, counselors,
in working with an individual student, will quantify
mentally a variety of data about that student and come
up with a guess, or a hunch, or a meaningful statistical
probability based upon research, of that student's chances
for success in a given college. At our school these are
guesses or hunches, and it is the purpose of this study
to provide statistical tools to facilitate that prediction for the student's success.

For this study certain hypotheses have been formulated. For clarity of analysis these have been stated in terms of the null hypothesis. The use of this hypothesis involves the assumption that any observed differences may be attributed to chance factors.

In the statement of the hypotheses the word "grades" refers to marks received by the sample group in the specific courses under consideration.

Following are the hypotheses which will be explored:

1. Grades in college-preparatory English IV have no significant relationship to college grades in English as measured by grade point average in freshman English courses.

2. Grades in general English IV have no significant relationship to college grades in English as measured by grade point average in freshman English courses.

3. Grades in college-preparatory English IV have no significant relationship to success in college as determined by the total college grade point average at the end of the freshman year.

4. College-preparatory English IV has the same relationship as general English IV to college success as determined by total grade point average at the end of the freshman year.

5. Grades in college-preparatory American history have no significant relationship to success in college as determined by the total college grade point average at the end of the freshman year.

6. College-preparatory American history has the same relationship as general American history to college success as determined by total college grade point average at the end of the freshman year.

7. Overall grade point average in high school bears no significant relationship to college grade point average at the end of the freshman year.
8. There is no significant difference in the means of the grades earned by those students in the college-preparatory curriculum and those students in the non-college-preparatory curricula in high school as determined by college grade point average at the end of the freshman year.

9. There is no significant difference in the level of ability of those students who enroll in college from the college-preparatory curriculum and those students who enroll in college from the non-college-preparatory curricula as determined by the Otis Quick-Scoring Mental Abilities Test.

10. Counselors do not predict student success or failure in college to a degree better than that determined by chance.

Definition of Terms: Definitive explanations of several terms used throughout this paper are necessary for purposes of clarification.

"College" is used to refer to any institution of higher learning which offers four-year course plans leading to a baccalaureate degree or to those two-year schools whose courses are accredited as transferable to apply toward such degrees.

"College-preparatory curriculum" is that plan of study at Township High School District 214 which in course requirements provides preparation of high school students for admission to colleges and universities. Among the sixteen units of credit required for graduation, it demands the completion of two majors and two minors or three majors in the five academic fields: English, languages, mathematics, sciences, and social sciences. A major is composed of three or more units, a minor of two units of
credit in the same academic field. All students in this curriculum must include college-preparatory English IV and college-preparatory American history in their course plans.

"College-preparatory English IV" is a combination of English literature and grammar, with special emphasis on grammar review and theme writing to prepare students for freshman rhetoric courses in college.

"General English IV" is a less specialised course, giving some grammar review and considerable modern literature. Generally speaking, this course is designed for those students who have shown lack of ability in English.

"College-preparatory American history", offered in the junior year, places special emphasis upon depth study and reference reading as part of training for college entrance.

"General American history" is a survey course, largely confined to a text book, with only occasional reference reading required or elicited on a voluntary basis. Both courses carry on weekly studies of current events.

"Grade point average" refers to the arithmetic average of all final semester grades received in courses taken in school, excepting physical education and music, when numerical values have been assigned to letter grades according to the following pattern: A=5, B=4, C=3, D=2,
(Courses dealing with theory in both music and physical education were considered academic in character; therefore, grades in such courses were included in grade point average.) For the sake of convenience in interpretation and comparison, grades earned in freshman college courses were transposed according to the high school numerical pattern.

In determining success or failure in college the criterion used was our own, but it seemed reasonable to take into account the student's staying power. Therefore, in predicting college performance, "success" indicates an overall grade point average of 3.0, "failure" an overall grade point average of 2.99 or less at the end of the freshman year in college.

Organization of the Remainder of the Study. Following a review of related literature and a description of the procedures used in this study, a chapter each is devoted to the statistical analysis of course relationships, overall grade point averages, and ability levels, to the analysis of counselor predictions, and to a summary of, and conclusions drawn from, the study.
CHAPTER II

REVIEW OF THE LITERATURE

In order to provide background for this study, reports of the findings of several investigators who had done previous studies were reviewed. Pertaining to the first portion of this study (the relationship between grades in certain high school subjects and academic success in college), a great number of studies have been conducted. However, in relation to the second portion of this study, which concerns itself with the efficiency of counselor predictions of success in college, relatively few studies have been reported.

Many of the studies reviewed were designed to measure the extent of correlation which may exist between grades in high school subjects and grades subsequently earned in specific courses in college. Pertinent data from only a few of these have been selected for inclusion in this review.

Lauer and Evans\(^1\) conducted a study at Iowa State College on college freshmen in the year 1926-1927. In determining the relative predictive value of different

high school subjects on college grades, they used fall term
grade point average in college as the criterion. They
reported a correlation coefficient of +.45 between high
school English and fall term grade point average, a cor-
relation coefficient of +.44 between high school history
and fall term grade point average.

Grades in high school subjects were correlated with
grades in specific subjects in college by Gowen and Gooch\(^2\)
in a study conducted at the University of Maine and reported
in 1925. They obtained a correlation coefficient of +.28
when relating high school English to college English.

In a 1937 U. S. Office of Education Bulletin, Segel
and Proffitt\(^3\), reporting on some factors in the adjustment
of college students, concluded:

More investigations are needed which show the rela-
tionship between marks in specific high school
subjects and the same or other subject groups in
college. The results are needed more to place ad-
vice regarding the choice of college subjects and
courses upon a more objective basis.

At some variance with this conclusion is a statement

\(^2\)Gowen, J. W., and Gooch, M., "The Mental Attain-
ments of College Students in Relation to Previous Training", 
Journal of Educational Psychology, XVI, November 1925,
pp. 547-566.

\(^3\)Segel, David, and Proffitt, Maris M., "Some Factors
in the Adjustment of College Students", U. S. Office of
By and large success in predicting achievement in specific subjects has been no greater than in forecasting general scholarship. In the more academic subjects the predictive measures appear to have greater value than for such fields as art and music.

It is pointed out that this is probably due to the fact that most tests used measure verbal ability.

In connection with the prediction of general college ability, Brimm points out that it seems that success in high school, regardless of the courses selected, is a fairly consistent predictor for success in college. He further states that some studies have shown that rank in class is important even though some students take a college-preparatory course and others do not. In the same publication Brimm further notes that other studies have shown that a rank determined by using grades in only those courses required for college entrance is a better predictor than is the grade point average of all subjects.

Durflinger made a summary of findings and determined that the median correlation coefficient between high school

---

5Brimm, R. P., "Helping High School Students Predict Their Success In College", Nations Schools, LIX, April 1957, pp. 53-55.
grades and average college freshman grades was +.55.

Distribution of grades among individuals is discussed in an article by Jackson\(^7\) in which he reports on a study made at Michigan State University. He found that the percentage of students failing to attain a "C" average increases as the ability of the group decreases, although some do make satisfactory grades. He further points out that grade point average is based on the quality of a student's work; since this is so, a particular student's grade point average may not be representative of the total that he may eventually compile. He warns that care must be taken in making predictions for individuals, for probabilities are based on group performance.

To attack the problem of predictions for individual students, John L. Walker\(^8\) of Mt. Vernon, New York, conducted a study to evaluate counselor effectiveness. Following is a summary of those portions of his findings which seem pertinent to this study:

1. There was a wide range of counselor performance in predicting. Some predicted much better than chance would dictate, while some predicted

\(^7\)Jackson, R. A., "Prediction of the Academic Success of College Freshmen", Journal of Educational Psychology, XLVI, May 1955, pp. 296-301.

worse than chance would dictate.
2. Counselors were more accurate in predicting for brighter than for duller students.

In attempting to account for the wide range of counselor performance, two factors were mentioned by Mr. Walker:

1. Personality factors (which were not measured in this study) may operate to determine higher or lower grades.
2. Reliability of a marking system is not high.

From the studies reviewed, there might be drawn these general conclusions:

1. Utmost care must be taken in making predictions for individual students. It is necessary to examine not only high school grades, but all information available in guiding high school students with regard to their plans for college.
2. Research published thus far still leaves a great number of unanswered questions concerning prediction and variability in counseling.
CHAPTER III

PROCEDURE USED IN THE STUDY

The method used in this study may be classified as primarily statistical. The techniques employed included the use of product-moment correlation coefficients (with appropriate tests of significance), tests of significance of difference between means, and chi-square analysis. The remainder of this chapter is devoted to a description of the school and the student sample used, and an explanation of the procedures used in the collection of data.

Description of School and Student Sample. Township High School District 214, Arlington Heights, Cook County, Illinois, serves an area covering two townships and including six rapidly expanding suburban communities. The area is divided almost in half by the Northwestern Railroad, and lies about twenty miles northwest of the downtown area of Chicago. Students enter the four-year high school from eight separately organised public elementary school districts and six parochial elementary schools within the high school district.

In the school year 1955-56 there were enrolled in Township High School District 214, 1743 students, 307 of whom were graduating seniors. As measured by the Otis Quick Scoring Mental Abilities Test, the average I. Q. of all high school students was 110.3 in that year, and,
according to annual reports, was not appreciably different from the average of previous years. The range of ability, as measured by the Otis test, approximates that of a normal curve, with scores ranging from the low 80's into the 140's. The entire student body is almost equally divided as to numbers of boys and girls.

From the socio-economic point of view, the community is frequently described as "upper middle class" (whatever that may mean). It would be more accurate, probably, to say "middle-to-upper-middle class", since most families represent business and professional groups; there seems to be little ostentatious wealth, and, at the other extreme, little or no obvious poverty. Except for those engaged in providing goods and services for the local communities, the gainfully employed are commuters to Chicago.

The curriculum, which has ninety-eight course offerings, is organized into twelve departments of instruction: art, business education, English, foreign languages, home economics, industrial arts, mathematics, music, physical education, science, social science, and vocational agriculture.

Plans of study for the students, have been developed into four basic curricula: business education, college-preparatory, general, and vocational, which includes agriculture, home making, and industrial arts. Each curriculum prescribes a pattern of required and elective
courses for graduation. Student volition and parent consent determine the curriculum which each student shall follow, the initial decision being made in the pre-registration period before the student enters high school. A change in curriculum choice may be made at any registration period throughout the four years of high school following a student-parent-counselor conference in which the feasibility of a change has been discussed. Approximately 75 per cent of the sample studied had completed a course of study within the college-preparatory curriculum, the remaining 25 per cent had followed a variety of plans within the other three curricula.

The class of 1956 was selected as the sample to be used for this survey because, on the basis of ability, it would appear not to be different from the usual class graduating from Township High School District 214, and because, at the time this study was undertaken, those students who had enrolled in colleges and universities had just completed their freshman year.

Of the class of 307 graduates, 181 or 59 per cent matriculated at some college or university. An analysis of the overall grade point average attained by these students during the four years in high school showed that the greatest number of prospective students came from the first quarter of the class, that equal numbers came from the second and third quarters, and a considerably smaller
number from the fourth quarter of the class. On the basis of the percentage of students within a quartile range who sought advanced training in a college or university the results, as given in Table I, are worth noting.

**Table I**

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Number in College</th>
<th>Percentage in College</th>
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<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>77.9</td>
</tr>
<tr>
<td>2</td>
<td>48</td>
<td>62.3</td>
</tr>
<tr>
<td>3</td>
<td>48</td>
<td>62.3</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>32.5</td>
</tr>
</tbody>
</table>

A further breakdown of class rank in terms of college entrance reveals that 83 per cent of the top 10 per cent, 79 per cent of the upper third, and 69 per cent of the upper half of the class entered colleges and universities.

It is pertinent to this study to note the actual numerical grade-point-average spread of the sample. The valedictorian of the class attained an overall grade point average of 5.0 for her eight semesters in high
school; the student who ranked 301 (lowest ranking student who entered college) had a grade point average of 2.22.

Table II shows the total grade point average at the quartile intervals for the 181 students who entered college.

Table II

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Grade Point Average</th>
</tr>
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<tbody>
<tr>
<td>75</td>
<td>4.03</td>
</tr>
<tr>
<td>50</td>
<td>3.50</td>
</tr>
<tr>
<td>25</td>
<td>3.03</td>
</tr>
</tbody>
</table>

The 23rd percentile was the point at which the 3.0 grade point average fell. The grade point average indicated by the high school as being the minimum for recommendation to colleges is 3.0; forty members of the class of 1956 who entered colleges and universities had a grade point average below 3.0.

A Brief Survey of Colleges and Universities Attended. The seventy-two colleges and universities selected by the sample are located in seventeen different states and the District of Columbia, and are scattered from Massachusetts to Arizona and from Florida to Minnesota. Twenty-one
of the schools are located in the state of Illinois, twenty-four in states bordering on Illinois, and only twelve are outside a radius of about four hundred miles from Arlington Heights. Among the schools are one Ivy League college, three other private schools for men, two private schools for women, seventeen large state universities, forty-seven relatively small coeducational liberal arts colleges, and two teachers' colleges.

Within the state of Illinois, forty-eight students, (26 per cent of those entering college) matriculated at six tax-supported schools; thirty-five students (19 per cent) entered privately controlled colleges and universities. Thus 45 per cent of the group studied attended colleges within the state of their residence.

Procedures Used in the Collection of Data. Each fall, the registrar at Township High School District 214 sends to each of the graduates of the previous June a card asking for information concerning his status as of September. Telephone calls are made to follow up on incomplete returns. The list, thus compiled, of students attending colleges and universities, together with the names of the schools, formed the basis for the present study.

To the registrar of each institution was sent a letter listing our 1956 graduates who had registered there, asking for academic information. Term grades in all
courses taken during the year 1956-57, together with reports on probationary status, withdrawal, transfer, etc. were requested.

Letters were sent to seventy-two colleges and universities, responses were received from sixty-nine of them. In the case of two schools, the grading system used was such that accurate transposition to the numerical pattern of Township High School District 214 was not possible, therefore the records of the students enrolled in those schools were not used in this study. In some individual instances the transcripts were incomplete or the students had received a grade of "incomplete" in one or more courses; these records, too, were excluded from this study. The records of two students were not available to us because they owed money to the bursar's office at the university. Altogether, the records of twenty-one students were either incomplete or missing. This study, then, involves various phases of the academic record of the freshman year in college of 160 students, 6 of whom withdrew before the end of the academic year.

Of the 154 students whose records were used for the computation of the correlation coefficients, 115 had followed course plans in the college-preparatory curriculum; the remaining 39 had been in non-college preparatory curricula during their four years in high school.

Since both college-preparatory American history
and college-preparatory English IV may be elected by students other than those in the college-preparatory curriculum, the numbers of students used in reporting the correlation study need not necessarily be consistent with those given in the preceding paragraph. A further deviation results from the fact that some students, in the junior year, were enrolled in core III, a double-period course which combines American history and English III. Records of these students were not used in computing correlation coefficients involving American history, either college-preparatory or general, because English and history grades were not recorded separately.

Predictions of the "success" or "failure" in the colleges of their choice of the 154 students upon whose records this study was made will be treated more fully in Chapter V. The predictions were made by the two counselors for the senior class who have the responsibility of recommending, or not recommending, graduating students to the colleges and universities to which the students may make applications for admission. Complete records of actual recommendations had not been filed, thus it was necessary to simulate a real recommendation situation. Before transcripts of credits were received from colleges and universities, the two counselors, working separately, evaluated each student's overall high school record. Included in these records were lists of courses
taken, grades earned, standardized test scores, extracurricular activities, and composite rating scales of teacher-evaluations of personality factors. The counselor evaluation was in terms of the probability of the student's "success" at the college of his choice. If the counselor felt that the student would be able to attain a grade point average of 3.0 at the end of the freshman year in a particular college, he predicted "success" for that student in that college. If the counselor felt that the student would not be able to attain a grade point average of 3.0 at the end of the freshman year in a particular college, he predicted "failure" for that student in that college. It is important to note that, in each instance, the student's "success" or "failure" was predicted with reference to a specific college.
CHAPTER IV

STATISTICAL ANALYSIS OF COURSE GRADES RELATED TO COLLEGE GRADE POINT AVERAGE

In attempting to assess the relationship of grades earned in certain high school subjects to academic success in college, specific subjects required of all students in the college-preparatory curriculum were selected for study. These specific subjects were college-preparatory English IV and college-preparatory American history. Since these two subjects are common to course plans of all students in the college-preparatory curriculum, and since they are the only two required courses carrying the "college-preparatory" label, counselors have been particularly interested in learning their actual relationship to academic success in college. For the purpose of comparison, general English IV and general American history have been included in this study.

In order to evaluate the requirement that all students in the college-preparatory curriculum complete college-preparatory English IV and college-preparatory American history, and in order to evaluate grades in these courses as predictors of academic success in college, correlation coefficients between grades in high school and grades in the freshman year in college were calculated.
in the following pairs:

a. College-preparatory English IV and college freshman English,
b. General English IV and college freshman English,
c. College-preparatory English IV and total college grade point average at the end of the freshman year,
d. General English IV and total college grade point average at the end of the freshman year,
e. College-preparatory American history and total college grade point average at the end of the freshman year,
f. General American history and total college grade point average at the end of the freshman year,
g. Total grade point average at the end of eight semesters in high school and total grade point average at the end of the freshman year in college.

The product moment correlation was calculated in accordance with the following formula:\(^1\):

\[
\rho_{xy} = \frac{\frac{\sum xy}{N} - M_x M_y}{\sigma_x \sigma_y}
\]

For the above, standard deviation (S. D.) was calculated by the formula below\(^2\):

\[
S. D. = \sqrt{\frac{\sum x^2}{N} - M_x^2}
\]

---

2Ibid., p. 168
In computational form, the product-moment correlation formula may be written in the following manner:

\[ r_{xy} = \frac{N \langle XY \rangle - \langle X \rangle \langle Y \rangle}{\sqrt{N \langle X^2 \rangle - \langle X \rangle^2} \sqrt{N \langle Y^2 \rangle - \langle Y \rangle^2}} \]

Correlation coefficients have no meaning unless the significance of the magnitude of the coefficient is determined. For these product-moment correlation coefficients, therefore, tests of significance were made, utilizing the number of cases in each sample and tabled values of correlation coefficients, at the .05 and .01 level of significance.

Let us first consider Hypothesis 1 as it is stated in Chapter I:

Grades in college-preparatory English IV have no significant relationship to college grades in English as measured by grade point average in freshman English courses.

The correlation coefficient between college-preparatory English IV and college-freshman English was +.52. This coefficient of correlation was significant at the .01 level. Thus the null hypothesis can be rejected, since such a relationship could have existed by chance.

---


once in one hundred times.

Now let us examine Hypothesis 2 as it is stated in Chapter I:

Grades in general English IV have no significant relationship to college grades in English as measured by grade point average in freshman English courses.

Between general English IV and college freshman English the product-moment coefficient of correlation was -.03, which indicates, at best, negligible relationship. This coefficient of correlation was not significant. The null hypothesis can be accepted, for no relationship existed between the factors under consideration.

Hypothesis 3 was stated thus in Chapter I:

Grades in college-preparatory English IV have no significant relationship to success in college as determined by the total college grade point average at the end of the freshman year.

The coefficient of correlation between college-preparatory English IV and total college grade point average at the end of the freshman year was +.49. Since this coefficient of correlation was significant at the .01 level, the null hypothesis can be rejected.

Turning to Hypothesis 4, we find it stated thus in Chapter I:

College-preparatory English IV has the same relationship as general English IV to college success as determined by total college grade point average at the end of the freshman year.

Utilization of the data calculated for Hypothesis 3
was necessary for computations involved in determining acceptance or rejection of this hypothesis. It was further necessary to determine the coefficient of correlation between general English IV and college grade point average at the end of the freshman year. The correlation coefficient was +.212. While this might seem to denote that a slight correlation existed, because of the small size of the sample this correlation was not significant, even at the .05 level.

To test the significance of difference between the correlation coefficients, the following formula was used:\(^5\)

\[
Z = \frac{Z_1 - Z_2}{\sqrt{\frac{1}{N_1 - 3} + \frac{1}{N_2 - 3}}} 
\]

where \(Z_1\) equals

\[
\frac{1}{2} \log_e \left( \frac{1 + r_1}{1 - r_1} \right) 
\]

and \(Z_2\) equals

\[
\frac{1}{2} \log_e \left( \frac{1 + r_2}{1 - r_2} \right) 
\]

Significance is determined by the use of normal tabled values for \(Z\). The coefficient of correlation +.49 (between college-preparatory English IV and college grade point average at the end of the freshman year) and +.212

---

(between general English IV and college grade point average at the end of the freshman year) provided a Z value of 1.32, which has a probability of .906. Since the .05 level is the point at which significance is determined for this study, it can be concluded, then, that the correlation coefficients are not significantly different and the null hypothesis may be accepted.

In Chapter I, Hypothesis 5 was stated as follows:

Grades in college-preparatory American history have no significant relationship to success in college as determined by the total college grade point average at the end of the freshman year.

In correlating college-preparatory American history and total college grade point average at the end of the freshman year a correlation coefficient of +.302 was obtained. The test for determining the significance of this correlation showed it to be significant at the .01 level. As a result, the null hypothesis can be rejected.

Hypothesis 6 was stated thus in Chapter I:

College-preparatory American history has the same relationship as general American history to college success as determined by total college grade point average at the end of the freshman year.

As in the case of Hypothesis 4, the significance of the difference between the appropriate correlation coefficients was determined by the application of the test of significance of differences of two correlation coefficients.

The coefficient of correlation between general
American history and total grade point average at the end of the freshman year in college was +.61, significant at the .01 level; +.302 was the correlation coefficient between college-preparatory American history and total grade point average at the end of the freshman year in college. The Z value of 1.52 was found to have a probability of .935. Again, rejecting at the .05 level, there was not a significant difference between the correlation coefficients. The null hypothesis can be accepted.

Reviewing the statistical data concerning the relationship of grades in high school English IV and American history to academic success in college as measured by total grade point average at the end of the freshman year in college, some relationships are worthy of comment. Although Z-values obtained in determining the significance of difference between the correlation coefficients in the case of both pairs of courses showed the correlation coefficients not to be significantly different, the writer was interested in examining more closely the relationship between grades in each high school course and total college grade point average. The correlation coefficient between grades in college-preparatory English IV and total college grade point average was +.49, significant at the .01 level, while the correlation coefficient between grades in general English IV and total college grade point average (+.212) was not statistically significant. Assuming that a
"college-preparatory" course should better prepare a student for academic work in college, this result would have been expected. It should have followed logically, then, that comparable data would have been obtained in the case of college-preparatory American history and general American history. This did not happen. The correlation coefficient between grades in college-preparatory American history and total college grade point average was +.302, significant at the .01 level, while the correlation coefficient between the grades in general American history and total college grade point average was +.61, significant at the .01 level. The Z-value indicated that these correlation coefficients were not significantly different. However, the direction of the difference between the two correlations was the reverse of what might be expected. Why did this happen? At least two factors can be mentioned and should be considered if, at a future date, a more detailed related study is undertaken:

1. The small size of the sample in the case of both general English IV (23) and general American history (21) gives undue significance to deviations.
2. Students enrolled in college-preparatory American history constitute a rather homogeneous ability group, making correlation analysis less meaningful. The greater variability within the college-preparatory English IV group lends itself to a correlation study.

Not infrequently students with relatively high grade point averages elect to take general American history in preference to college-preparatory American history because
Their academic interests are such that they do not choose to spend, in the social science area, the additional time required for depth studies in the college-preparatory course. Furthermore, they seem to feel that college-preparatory American history per se will make little contribution to their success in college. Therefore, some, of their own volition, transfer out when "the going gets rough". On the other hand, most college-bound students seem to accept, without question, the assumption that college-preparatory English IV will better prepare them for college freshman English. As a result, they will include it in their four-year course plans, whether or not they have been following the college-preparatory curriculum. Subsequently, they are loathe to transfer out of it to general English IV except upon the specific recommendation, and even insistence, of the teacher that they do so.

Let us now consider Hypothesis 7 as stated in Chapter I:

Overall grade point average in high school bears no significant relationship to college grade point average at the end of the freshman year.

The coefficient of correlation between the total grade point average at the end of eight semesters in high school and total grade point average at the end of the freshman year in college was +.82, which was significant at the .01 level. The null hypothesis can be rejected. Figure 1 shows the scattergram for this particular inter correlation.
High School Grade Point Average

<table>
<thead>
<tr>
<th>0 - 0.99</th>
<th>1.0 - 1.99</th>
<th>2.0 - 2.99</th>
<th>3.0 - 3.99</th>
<th>4.0 - 4.99</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>83</td>
<td>84</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1.
Scatter Diagram of High School and College Grade Point Averages For 154 Students
Data for the foregoing correlations are summarized in Table 3 as follows.

Further analysis seemed desirable before inferences were drawn from the statistical data given above. As a result, tests for determining the significance of the difference between means of the high school groups were applied. Following is the formula which was used:

\[
t = \frac{M_1 - M_2}{\sqrt{\left(\frac{N_1 \sigma_1^2 + N_2 \sigma_2^2}{N_1 + N_2 - 2}\right) \left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}
\]

Tabulated values for "t" at .05 and .01 were utilized to determine significance level. In all cases the null hypothesis was rejected if "t" values exceeded the .05 level of significance.

In Table IV, as follows, are the means (M) and standard deviations (SD) used in determining the significance of difference between the means of the variables.

The mean differences from Table IV with calculated significance figures are given in Table V.

---

6Lindquist, op. cit., p. 138
### Table III

**Correlations Between Grades in High School and Grades in College at the End Of the Freshman Year**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$r$</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>College-preparatory English IV and college English</td>
<td>121</td>
<td>+.52</td>
<td>.01</td>
</tr>
<tr>
<td>General English IV and college English</td>
<td>23</td>
<td>-.03</td>
<td>not significant</td>
</tr>
<tr>
<td>College-preparatory English IV and College G. P. A.*</td>
<td>121</td>
<td>+.49</td>
<td>.01</td>
</tr>
<tr>
<td>General English IV and college G. P. A.</td>
<td>23</td>
<td>+.212</td>
<td>not significant</td>
</tr>
<tr>
<td>College-preparatory American history and college G. P. A.</td>
<td>97</td>
<td>+.302</td>
<td>.01</td>
</tr>
<tr>
<td>General American history and college G. P. A.</td>
<td>21</td>
<td>+.61</td>
<td>.01</td>
</tr>
<tr>
<td>High school G. P. A. and college G. P. A.</td>
<td>154</td>
<td>+.82</td>
<td>.01</td>
</tr>
</tbody>
</table>

*G. P. A. = grade point average*
**Table IV**

Means and Standard Deviations Utilized For Determining Differences Among Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>College G. P. A.*</td>
<td>College-preparatory</td>
<td>121</td>
<td>3.38</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>College-preparatory English IV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>General English IV</td>
<td>23</td>
<td>2.81</td>
<td>.67</td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>College-preparatory</td>
<td>97</td>
<td>3.40</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>American history</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>General American history</td>
<td>21</td>
<td>2.62</td>
<td>1.05</td>
</tr>
<tr>
<td>College English grade average</td>
<td>College-preparatory</td>
<td>121</td>
<td>3.38</td>
<td>.768</td>
</tr>
<tr>
<td></td>
<td>English IV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College English grade average</td>
<td>General English IV</td>
<td>23</td>
<td>2.29</td>
<td>.854</td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>College-preparatory</td>
<td>115</td>
<td>3.40</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>Non-college-preparatory</td>
<td>39</td>
<td>2.71</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otis IQ Score</td>
<td>College-preparatory</td>
<td>93</td>
<td>116.12</td>
<td>7.67</td>
</tr>
<tr>
<td></td>
<td>curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otis IQ Score</td>
<td>Non-college-preparatory</td>
<td>32</td>
<td>108.47</td>
<td>10.84</td>
</tr>
<tr>
<td></td>
<td>curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school G. P. A.</td>
<td>College-preparatory</td>
<td>115</td>
<td>3.78</td>
<td>.58</td>
</tr>
<tr>
<td></td>
<td>curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school G. P. A.</td>
<td>Non-college-preparatory</td>
<td>39</td>
<td>3.07</td>
<td>.44</td>
</tr>
<tr>
<td></td>
<td>curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*G. P. A. = grade point average*
<table>
<thead>
<tr>
<th>Variable</th>
<th>Group 2</th>
<th>Group 1</th>
<th>Mean Difference</th>
<th>t</th>
<th>Significant Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>College G. P. A.</td>
<td>College-preparatory English IV</td>
<td>General English IV</td>
<td>.57</td>
<td>3.80</td>
<td>.01</td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>College-preparatory American history</td>
<td>General American history</td>
<td>.78</td>
<td>1.13</td>
<td>---</td>
</tr>
<tr>
<td>College English G. P. A.</td>
<td>College-preparatory English IV</td>
<td>General English IV</td>
<td>1.09</td>
<td>5.66</td>
<td>.01</td>
</tr>
<tr>
<td>College G. P. A.</td>
<td>College-preparatory curriculum</td>
<td>Non-college-preparatory curricula</td>
<td>.69</td>
<td>5.80</td>
<td>.01</td>
</tr>
<tr>
<td>Otis IQ Score</td>
<td>College-preparatory curriculum</td>
<td>Non-college-preparatory curricula</td>
<td>7.65</td>
<td>3.69</td>
<td>.01</td>
</tr>
<tr>
<td>High school G. P. A.</td>
<td>College-preparatory curriculum</td>
<td>Non-college-preparatory curricula</td>
<td>.71</td>
<td>8.25</td>
<td>.01</td>
</tr>
</tbody>
</table>

*G. P. A. = grade point average
The mean total grade point average at the end of the freshman year in college-preparatory English IV was 3.38; the mean for students enrolled in general English IV was 2.81. The t-ratio (3.80) was significant at the .01 level. This indicates that students enrolled in college-preparatory English IV made significantly better grades than did the students enrolled in general English IV.

The mean total grade point average at the end of the freshman year in college for students completing college-preparatory American history was 3.40; the mean for those completing general American history was 2.62. The t-ratio (1.13) was not significant, even at the .10 level. This difference, then could have occurred by chance.

The mean grade point average in college English for college-preparatory English IV students was 3.38; the mean grade point average in college English for the general English IV students was 2.29. The t-ratio (5.664) was significant at the .01 level.

Hypothesis 8 was stated thus in Chapter I:

There is no significant difference in the means of the grades earned by those students in the college-preparatory curriculum and those students in the non-college-preparatory curricula in high school as determined by college grade point average at the end of the freshman year.

The mean total grade point average at the end of the freshman year in college for students completing the college-preparatory curriculum in high school was 3.40; the mean
for those completing other (non-college-preparatory) curricula was 2.71. The t-ratio (5.80) was significant at the .01 level. The null hypothesis can be rejected, since the difference between the means of the grades earned by the two groups was significant.

No hypothesis had been developed to ascertain the difference between the college-preparatory and non-college-preparatory groups in their attainment at the high school level. However, it became a matter of importance to learn whether or not a real difference had existed. Therefore the t-test of significance was applied to the pertinent data. The mean total grade point average at the end of eight semesters in high school for those students completing the college-preparatory curriculum was 3.78; the mean for those completing non-college-preparatory curricula was 3.07. The t-ratio (8.25) was significant at the .01 level. The difference between the means of the grades earned in high school by the two groups was significant.

The question arose as to whether or not the significant difference in grades, both in high school and in college, of college-preparatory and non-college-preparatory groups might be attributable to a difference between the abilities of the two groups. The Otis Quick Scoring Mental Abilities Test was used as a measure for determining ability. This test is administered in March to all eighth grade students in all elementary and junior high schools tributary
to Township High School District 214. IQ scores obtained from this test were not available for all individuals in the sample. (This test was not being given consistently to transfer students at this time.) However, a large enough percentage of the total (82 per cent) was available to determine, with reasonable accuracy, the probability of similarity or difference between the two groups. Therefore, Hypothesis 9 was formulated. In Chapter I it was stated as follows:

There is no significant difference in the level of ability of those students who enroll in college from the college-preparatory curriculum and those students who enroll in college from the non-college-preparatory curricula as determined by the Otis Quick-Scoring Mental Abilities Test.

The mean IQ score for students completing the college-preparatory curriculum was 116.118; the mean IQ score for those completing non-college-preparatory curricula was 108.469. The t-ratio (3.695) was significant at the .01 level. The null hypothesis can be rejected.

This statistical evidence of a difference in ability between the two groups made it seem advisable to test the significance of the difference between college grades of the groups enrolled in English IV and in American history.

The mean total grade point average at the end of the freshman year in college for students enrolled in college-preparatory English IV was 3.38; the mean for students enrolled in general English IV was 2.81. The
t-ratio (3.80) was significant at the .01 level. This difference could have occurred by chance only once in one hundred times.

The mean total grade point average in college English for students who had completed college-preparatory English IV was 3.38; the mean for students who had completed general English IV was 2.29. The t-ratio (5.664) was significant at the .01 level. Thus there was a significant difference between the groups in their grades in college English during the freshman year.

The mean total grade point average at the end of the freshman year in college for students completing college-preparatory American history was 3.40; the mean for those completing general American history was 2.62. The t-ratio (1.13) was not significant even at the .10 level. This difference could have occurred by chance.

With the exception of those for the American history groups, all tests of the significance of the mean differences between the grades of college-preparatory and non-college-preparatory groups indicated that there was a significant statistical difference between the two groups. Thus any conclusions which are drawn concerning the relative value of the college-preparatory and non-college-preparatory courses or curricula per se as preparation for college or predictors of academic success at the freshman level in college must be made with caution.
No summary is found here, as the data from this chapter, together with that found in Chapter V, are the bases for the conclusions to be stated in Chapter VI.
CHAPTER V

EFFICIENCY OF COUNSELOR PREDICTION
OF COLLEGE SUCCESS

With increasing percentages of students, from the highest to the lowest quarters of their classes, seeking admission to colleges and universities each fall, the prediction of their success or failure in a particular school becomes increasingly important. That counselors are becoming more concerned about identification of factors which may contribute to more accurate prediction is evidenced by the growing number of reported investigations in this area. The study conducted by John L. Walker, discussed in Chapter II, contained some elements of prediction comparable to those under consideration in this section of the present study. Both studies were concerned with devising a method whereby the accuracy of counselors' predictions might be measured and determining, if possible, wherein might lie the weaknesses of such predictions. Hypothesis 10, as stated in Chapter I, was included in this study in an attempt to treat this problem of counselor efficiency in prediction:

Counselors do not predict student success or failure in college to a degree better than that determined by chance.

It was pointed out in Chapter I that counselors in Township High School District 214 have followed no particular criteria in predicting a student's chances for
success in a given college. Thus, each of the two counselors participating in this phase of the study used his own method of evaluation. Each counselor, knowing the college or university in which the individual enrolled, made predictions of "success" (attaining a 3.0 grade point average at the end of the freshman year in college) or "failure" (attaining less than a 3.0 average) for each of the students who had entered college. As complete records of actual recommendations had not been filed, it was necessary to simulate a real recommendation situation. The two counselors, working separately, evaluated each student's overall high school record and predicted the probability of the student's "success" at the college of his choice.

Later on, complete and usable transcripts, from sixty-eight colleges and universities, were received for one hundred sixty students, six of whom had withdrawn from college before the end of the freshman year. Data on the predictions for these 160 students are summarized in Table VI.
Table VI

Data Showing Accuracy of Counselor’s Predictions for 160 Students

<table>
<thead>
<tr>
<th>Counselor Prediction</th>
<th>Total</th>
<th>Prediction Right</th>
<th>Students who Withdrew</th>
<th>Total Right</th>
<th>Total Wrong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted to “Succeed”</td>
<td>145</td>
<td>104</td>
<td>37</td>
<td>104</td>
<td>41</td>
</tr>
<tr>
<td>Predicted to “Fail”</td>
<td>14</td>
<td>10</td>
<td>2</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Disagreement of Counselors</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*This an unusually high degree of agreement between two counselors. In few other instances there was disagreement, but usable transcripts were not received for those students. However, it might be reasonable to expect that two counselors, working closely together over a period of years in making recommendations to colleges, would tend to agree in their judgments.

In order to test Hypothesis 10, this formula was used:

\[
\chi^2 = \frac{(f_o - f_t)^2}{f_t}
\]

where \(f_o\) equals observed frequency and \(f_t\) equals theoretical frequency.

---

This is a test to determine whether an observed frequency is significantly different from a theoretical frequency (in this case, chance).

The $\chi^2$ value was 31.5, which was significant at the .01 level. The null hypothesis was rejected; these counselors predicted student "success" or "failure" in college to a degree better than that determined by chance.

Walker\(^2\) reported that some of his counselors predicted worse than might be expected by chance. He also indicated greater success in prediction with the better students. In looking more critically at efficiency of prediction, the question arises concerning whether the completely optimistic counselor (one who looked on his students as the finest group in the world, and predicted that all would succeed if they tried college) might be operating with a prediction more efficient than might be expected by chance. Using the data in Table VI, the chi-square test was applied, assuming that all who went to college were predicted to succeed. This analysis provided a $\chi^2$ value of 16.26, again significant at the .01 level. This indicated that the counselor who predicted that all who went to college would "succeed" had a higher level of

efficiency of prediction than might be expected by chance. Therefore, a more rigorous test of counselor efficiency should be made.

Since a chance prediction is not a very good test of counselor efficiency, it seemed desirable to see if there is a difference in the accuracy with which counselors predict "success" and "failure". Table VII provides the data, and the following formula was used to test the significance of the difference between the percentages:

\[
Z = \frac{S - F}{\sqrt{pq \frac{1}{N_S} + \frac{1}{N_f}}}
\]

where \( p = \frac{S + F}{N_S + N_f} \)

and \( q = 1 - p \)

\( S \) equals number predicted to succeed who succeeded.

\( F \) equals number predicted to fail who failed.

\( N_S \) equals total number who succeeded.

\( N_f \) equals total number who failed.

---

Table VII
Student Achievement as Related To Counselor Predictions

<table>
<thead>
<tr>
<th>Student Achievement</th>
<th>Counselor Prediction</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predicted:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Success&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Failure&quot;</td>
<td></td>
</tr>
<tr>
<td>Number students who succeeded</td>
<td>104 : 2</td>
<td>106</td>
</tr>
<tr>
<td>Number students who failed</td>
<td>42 : 12</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>146 : 14</td>
<td>160</td>
</tr>
</tbody>
</table>

Significance was determined by the use of the normal tabled values for Z. In this case Z equalled 10.147, which was significant at the .01 level. It is apparent that the counselors were more accurate in their predictions for those students who "succeeded" than for those who "failed".

Why should this be so? Several factors might have entered into these errors in judgment. Let us summarize them briefly:

1. Unforeseen factors occur which create student "failure" according to the criterion, but which could not be predicted (e.g. prolonged illness, death of a parent, or automobile accidents involving the student, which caused students to withdraw from college).

2. Perhaps counselors, as evidenced by the profession they choose, tend to be optimistic. Working with young people, helping them to solve their problems, certainly should encourage the development of a personal philosophy which includes the belief that "tomorrow will be better".
3. Counselors may not have sufficient knowledge of specific colleges to make accurate predictions of student success or failure. Undoubtedly there are different standards for different colleges and counselors may not be aware of precisely what those different standards may be.

4. Counselors may not take sufficient cognizance of the impact of college life on adjustment, particularly on certain students who appeared to make a satisfactory adjustment in high school. (e.g. Students, whose decisions have been made by parents throughout high school and before, often find great difficulties in assuming independence, especially in personal time budgeting, upon entering college.)

5. Counselors may not know, at the time of recommendation, the major field of interest of a student. It is entirely possible that a given student might "succeed" in the liberal arts college, yet "fail" in the college of engineering within the same university. (There was evidence of this very thing in the case of four students who, at the end of the first term, transferred from one college to another within the same university.)

6. Counselors may be unduly swayed by observed personality traits of a student ("conscientious", "reliable", "poised", "socially mature", etc.) and expect these to compensate for mediocre scholastic achievement and below-average standard test scores.

7. Counselors may find it difficult to assess the intensity of the motivational factor inducing the student to attend college.

8. Counselor criterion of "success" or "failure" may not be in accord with criteria of colleges.

Further examination of the college transcripts of those thirty-seven students, predicted to "succeed", who had less than a 3.0 grade point average at the end of the freshman year reveals some significant facts.

Of the thirty-seven students, eleven were retained in college on probation, twenty-two were reported "in good standing", while only four were "dismissed for poor scholarship". Thus it would appear that the criterion established
in this study for "success" in college (3.0 grade point average at the end of the freshman year) was too rigorous.

Certainly the first seven factors listed above make more difficult the accurate prediction of student achievement in college, and the eighth factor is exceedingly important in planning a study of counselor efficiency in predicting student success or failure in college. Any future study should consider reducing the criterion (grade point average below which a student would be said to "fail") to a figure lower than 3.0, particularly if the grade point average being used is that for the freshman year in college.

Further inspection of the data for those reported in this study as "failed", yet whose college transcripts carried the "in good standing" notation (twenty-four students) revealed some pertinent facts:

1. For 19 of these college freshman, grade point average ranged from 2.99 through 2.50 with the highest frequency in the 2.64-2.60 interval.
2. College freshman grade point average for the other five students ranged from 2.48 down to 2.125 (little better than a "D" average).

Of those ten students whose transcripts showed that they had been "dismissed for poor scholarship", only two had an overall college freshman grade point average above 2.5. Data for this study would indicate, then, that an investigator might establish a criterion of 2.5 (midway between a "D" and a "C" average) and still be operating within the criterion that colleges might assume for the freshman year.
CHAPTER VI

SUMMARY AND CONCLUSIONS

The purposes of this study were:

1. To determine the relationship between certain courses in high school and college-preparatory curriculum and college achievement, and

2. To evaluate counselor efficiency in predicting college success.

With reference to the first of these purposes, the following conclusions may be drawn:

1. Ability levels between students in the college-preparatory curriculum and non-college-preparatory curricula are different. This conclusion, therefore, creates some question relative to the validity of specific course and/or curricular impact on college grades. Nevertheless, additional statements are listed below.

2. College-preparatory English IV has a much better relationship than general English IV to college English grades. Whether this indicates a causal relationship or reflects the ability differences between the groups is not known.

3. College-preparatory English IV has a much better relationship than general English IV to overall grade point average at the end of the freshman
year in college. Again, this study did not provide evidence to indicate whether the relationship was causal or a reflection of the ability difference between the groups.

4. There is little evidence to support the assumption that there is a positive relationship between either college preparatory or general American history and college success.

5. As has been the case in many previous studies, so in the present one total grade point average in high school had a better relationship to college freshman grade point average than did grades in any single subject. This study indicates that it is the best single predictor of college success among those examined. This is understandable, for the framework within which students are operating is much the same for both high school and college; they are going to school, studying, and competing for grades.

It may be that there are characteristics inherent in the college-preparatory curriculum which seem to make it a better predictor of college success than are non-college-preparatory curricula. The pattern of academic courses required in the college-preparatory curriculum may suggest better preparation for college. The pattern of academic courses required may weed out the poorer students. The
students in the college-preparatory curriculum may be more highly motivated toward college, since the deliberate planning involved in the completion of majors and minors may be indicative of long-range plans for college.

With reference to the second purpose of this study, that of evaluating the efficiency of counselor predictions, the following conclusion may be drawn: the efficiency of counselor prediction of college success is determined to a large degree by the criterion used for "success" or "failure". Because of the rigorous criterion used here counselors tended to be less accurate in predicting "failure". Further analysis revealed that, in fact, many of the students did not "fail" according to college requirements, even though the criterion had forced them into the "failure" group.

As a result of this study, several suggestions for further investigation may be listed:

1. The factor of ability-level differences between college-preparatory and non-college-preparatory groups should be held constant so that the actual impact of the curricula could be assessed. More complex statistical analysis could allow for that.

2. There is a need for research directed toward identifying the "plus" factors (those in addition to measurable academic aptitude) which contribute to academic success in college.
3. When establishing criteria for "success" or "failure" in order to evaluate counselor predictions of academic success in college, the grade point average should be down-graded from that used in this study. It would seem that setting the first year college grade point average at 2.5 would be more in line with college standards.
BIBLIOGRAPHY


Krueger, A.H., and Langan, G., "Evaluating the Curriculum; Helpful Information Obtained Through Follow-up Study
of Recent Graduates". Clearing House, 32:480-4, April 1958.


Dear Sir:

As we are undertaking a follow-up study of our 1956 graduates who are completing their freshman year in college, we would appreciate a report of courses taken, term grades earned for the year 1956-57, and any other academic information (such as probationary status, withdrawal, transfer, dismissal, etc.) which you can make available to us for those students who matriculated at your institution in September, 1956. If at all possible, we would like the information by August 1, 1957.

According to our records the following 1956 graduates of Township High School district 214 have been registered at this year:

_____________________
_____________________
_____________________

We will appreciate any academic information which you may be able to send us. The results of this study will be used to help us strengthen our college preparatory program and improve our techniques for recommending students to colleges and universities.

Very truly yours,

Leotta Hampton
College Counselor