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UNIVERSITY OF LOUISVILLE

A STUDY OF THE SUCCESS OF THE GRADUATES OF TEN
CLASSES OF THE LOUISVILLE MALE HIGH SCHOOL IN
THE FIRST TWO YEARS IN THE COLLEGE OF LIBERAL
ARTS OF THE UNIVERSITY OF LOUISVILLE

A Dissertation

Submitted to the Faculty

Of the Graduate School of the University of Louisville

In Partial Fulfillment of the

Requirements for the Degree

Of Master of Arts

Department of Education

by

James E. Green

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OF TEN CLASSES OF THE LOUISVILLE MALE
HIGH SCHOOL IN THE FIRST TWO YEARS IN
THE COLLEGE OF LIBERAL ARTS OF THE UNI-
VERSITY OF LOUISVILLE

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A STUDY OF THE SUCCESS OF THE GRADUATES OF
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Chapter I

INTRODUCTION

I

INTRODUCTION

What becomes of the high school boy after graduation? How successful is he in college? Teachers may wonder what becomes of their students, for beyond a few accidental contacts or cursory information, they do not know. This study is not an attempt to follow up all the students, or to discover the interests of a few, or to examine the occupations of any; it is to find out what success the graduates of ten consecutive classes have had during their first two years at the College of Liberal Arts of the University of Louisville. We want to indicate whether it would be reasonable to establish a basis of prognosis. We want to know if we can set up an advisory procedure. The present investigation may be interpreted as an attempt to find out (1) whether there is a sufficient degree of correlation between high school and college records to warrant definite attempts to counsel graduates and (2) whether the records of graduates in the high school are sufficient to predict success in college.

In the Louisville Male High School, scholastic grades are given numerical values, and success may vary from seventy per cent to one hundred per cent. More students attain an average between seventy and eighty per cent than attain an average between eighty-five and one hundred per cent. An average of eighty-five per cent qualifies a student to become

a member of the Cum Laude Society, which is a national honor society of which the Louisville Male High School is a member. We may point out that while success is intangible, boundaries may be fixed or goals set or aims for achievement established. In this study, the word success is used to indicate whether the student has conformed to two sets of standards, one established by the Louisville Male High School and the other by the College of Liberal Arts of the University of Louisville. Whether or not these standards are so fixed as to be true measures is not the purpose of this inquiry. The existing standards have been accepted and used in determining the facts of this study.

The ten graduating classes of the Louisville Male High School from June, 1930, to February, 1935, inclusive, totaled 1511 graduates. Four hundred and thirty-six of this number have enrolled in the College of Liberal Arts of the University of Louisville. This number is sufficient to present indications of the trends in the various phases of high school and collegiate records studied.

One of the purposes of this study is to interest the faculty of the Louisville Male High School and particularly the members of the Mathematics Department, of which the writer is a member, in the progress of pupils whose foundations of success should have been laid in high school. Too often the ultimate goal of the teacher is the graduation of the pupils,

and there is a noticeable lack of interest in the later progress of the graduates. Whether it is possible to measure the success of graduates and translate the findings into terms that are meaningful to the instructors remains to be studied.

Since only the first two years of college work are to be studied, the success of the graduate during that period only will be considered. No attempt has been made to enumerate reasons for abandoning the college course, or to follow up subsequent education of graduates in institutions other than the College of Liberal Arts of the University of Louisville, or in other colleges of the University of Louisville than that of Liberal Arts. If a student completes two years of his college course with satisfactory scores on the Placement Tests and Sophomore Tests, and with satisfactory grades in various subject fields, then he is deemed to have succeeded.

The words Louisville Male High School and College of Liberal Arts of the University of Louisville will be used often enough to take up space unduly, so that from now on the abbreviations L.M.H.S. and U. of L. will be employed.

Since each entrant in the U. of L. is given at least one placement test in some field, the correlation between such a test and the I.Q. score or the correlation between such a test and the average grade received from L.M.H.S. is of value. The Sophomore Tests may be used as measures of attainment in the first two years of college.

The accumulation of data in the U. of L. for Placement Tests and Sophomore Tests shows that different methods have been used in different years in recording test scores with the resulting data not complete for all students. One Placement Test and one Sophomore Test, at least, were administered to each student who completed two years of college work.

The data used in the present study were taken from the permanent record files of the L.M.H.S. and from the office of the Registrar at the U. of L. For some graduating classes the I.Q. score records are so incomplete that no correlations can be obtained. When the I.Q. scores are compared with scores on Placement Tests, little significance can be attached to the correlation since few L.M.H.S. graduates had both scores.

A further purpose of this study is the establishment of significant criteria to eliminate students whose chances for success in college are at a minimum, and to enable the high school counselor to advise graduates wisely. If it is possible to set up such criteria that a student who has a certain rank and a certain I.Q. score, whose average for his junior and senior years is so much, and whose parents are engaged in a given occupation, may know what his chances of success are at the U. of L., we shall have substituted data for opinion.

Questions to be answered in this study:

1. Do L.M.H.S. graduates whose grades are highest enter the U. of L., go to other colleges, or not enter college?
2. Do L.M.H.S. graduates whose I.Q. scores are highest enter the U. of L., go to other colleges, or not enter college?
3. Is the first year of college more difficult than the second?
4. Has the age of the L.M.H.S. graduate any significance in his success in the U. of L.?
5. When do the lowest one-third of the graduates drop out?
6. Does the rank in the graduating class indicate the number of quality points earned the first semester?
7. Is there any relationship between the occupation of the parent and the success of the L.M.H.S. graduate at the U. of L.?
8. Does the study of mathematics in L.M.H.S. increase a student's chance for success in the U. of L.?
9. Is there any correlation between the L.M.H.S. scholastic averages and scores on the Psychological Test?
10. Is there any correlation between grades for English in L.M.H.S. and in the U. of L.?
11. Which group succeeds in the U. of L.?

Chapter II

A SURVEY OF THE LITERATURE PERTAINING TO THE STUDY

II

A SURVEY OF THE LITERATURE
PERTAINING TO THE STUDY

When the literature on the subject of success in college is surveyed, two phases are seen to be recurrent throughout the material. One of them is articulation, which implies guidance, and the other is prediction, which infers statistical measurement. Much has been written upon both aspects of the student's progress, on the one hand whether it is best for the high school graduate to attend college and on the other hand, what his chances of success are if he does attend college. The two questions are mutually dependent; so it does not matter which one is considered first. Let us take up articulation, for it perhaps has a broader range.

As an introduction to the problem and to the literature on the subject, we can do no better than to quote from the Foreword of the Research Bulletin¹ of the National Educational Association, which was written by Givens. "Nowhere is the problem of articulation more troublesome than for high schools and colleges, where the problem is complicated by traditional differences in purpose and procedure, by tremendous growth of both institutions during the past fifty years, and by the rapid changes in policy and practice now taking place thruout

1. Givens, Willard E., "Foreword." Research Bulletin of the National Educational Association, March, 1938. p. 64

the field of education. Neither the high school nor the college has been unmindful of, or indifferent toward, the imperfect articulation existing between them; but recent trends are forcing them to reevaluate their efforts to bring about greater unity. Frequently and earnestly inquiries such as the following are voiced: Is it possible so to coordinate the work of high school and college that the latter will receive from the high school those best fitted for college education? Can the difficulties of student adjustment be lessened so that more of those who enter college will remain and make the most of their opportunities?" A negative reply to Givens' question is voiced by Eells,¹ who says, "Some schools are not doing a satisfactory piece of guidance but in many cases are encouraging their graduates to enter higher educational institutions in which their probability of failure is relatively high." Perhaps not so strongly stated but equally decisively is Brammel's² observation that, "The National Survey of Secondary Education revealed that the greatest hindrance to improved articulation between the secondary school and the college is the lack of effective guidance programs in both secondary and higher education."

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1. Eells, Walter E., "The Collegiate Success of Secondary School Graduates," Journal of the American Association of Collegiate Registrars, April, 1938. p. 299
 2. Brammel, P. Roy, "Articulation of High School and College," National Survey of Secondary Education, Monograph No. 10 U.S. Office of Education. 1932. p. 93

Upon whom does the educational burden of orientation fall? From the Research Bulletin of the N.E.A.¹ we quote, "Ready adjustment to the new environment of the college on the part of an entering student often hinges on how quickly and how thoroly the proper college authorities become acquainted with him and his needs." To make such a transition Segel² says, "For effective guidance of students into college work it is necessary to be able to make some articulation between the student's capacities and interests and the program of studies offered in the college or university."

Why is the necessity to have an extensive guidance program greater now than formerly? Perhaps as the Research Bulletin of the N.E.A.³ states, "Approximately five times as many students are now in college as there were at the opening of the century. With this rapid growth in enrolment, the disparity has increased in the cultural and social background of college students, and in their respective abilities and interests." Another reason for the college awakening to the need for thorough guidance, according to Hartman⁴, is that, "Institutions of higher education in the United States have been severely criticized because of the seemingly unwarranted

1. Givens, Op. Cit., p. 102

2. Segel, David, "Prediction of Success in College," Bulletin No. 15, U.S. Office of Education, U.S. Government Printing Office, Washington, D. C., 1934. p. 1

3. Givens, Op. cit., p. 65

4. Hartman, Helen J., "Pre-College Guidance in Ohio," The School Review, November, 1937. p.662

amount of failure and elimination of students which occurs, particularly during the Freshman year." Then the same author places the blame. "A review of the literature reveals a rather general agreement. . . . that the secondary school has failed in (1) helping pupils to decide whether they should go to college, (2) giving guidance to pupils who have declared their intention of going to college." In confirmation of this last utterance, the N.E.A. Research Bulletin¹ says, "One of the important guidance functions generally conceded to belong to the high school is that of helping students to decide whether or not they should go to college." Again from the N.E.A. Bulletin² we read, "The obvious need for better guidance procedures for college freshmen is driven home by statistics on first year failures. Each elimination shows that the gap between high school and college has been too wide, at least for the student involved. Any effective program for bridging the gap between high school and college, moreover, must look to something more than the prevention of failures and a reduction in the number of freshman withdrawals." One method of eliminating particular failures is voiced by McQuitty,³ ". . . that sound high school foundation is more essential for success in college English, mathematics, and languages than it is for success in college social sciences,

1. Givens, op. cit., p. 70

2. Ibid., p. 66

3. McQuitty, John V., "Relative Scholarship of Graduates According to Accreditation of High Schools," Journal of the American Association of Collegiate Registrars, April, 1934. p. 188

and other academic subjects."

The N.E.A. Bulletin¹ shows that, "Widespread acceptance on the part of high schools of some measure of responsibility for advising students with respect to college entrance is indicated by the fact that, in giving this type of counsel, two-thirds of the schools included in this study follow some regular procedure." On the college level Johnston² says of guidance, "In connection with the counseling system. . . . continuous efforts have been made to discover valid information to be given entering freshmen regarding their prospects for success in college. . . .to save students from failure." Also on the college level Ficken³ mentions the "Efforts to avoid the appalling amount of waste occasioned by the high percentage of failures in the early semesters of college attendance. . . .pre-college testing and guidance. . . .with better selection of students. . . .and elimination. . . .of bad college risks."

An appreciation of the situation with a general analysis of means of prevention is suggested by Wood⁴ when he states, "Our control of high school-college articulation depends in the last analysis on the extent and quality of the information

1. Givens, Op. cit., p.111

2. Johnston, J.B. and Williamson, E.G., "A Follow Up Study of Early Scholastic Predictions in the University of Minnesota," School and Society, December 1, 1934. p.730

3. Ficken, C.E., "Predicting Achievement in the Liberal Arts College," School and Society, October 12, 1935. p.518

4. Wood, Ben D., "The Ultimate Basis for Satisfactory College-High School Relations," Journal of the American Association of Collegiate Registrars, July, 1934. p. 271

about individuals that is secured and wisely used before admission to college, during the admission and placement procedure, and after admission." In affirmation of this view we see from the N.E.A. Research Bulletin¹ that, "A factor cited by college authorities as essential to a satisfactory plan for selecting students was adequate acquaintance with the prospective student and his achievements growing out of close cooperation with the high school which he attended." A more practical suggestion is made by Crawford² who thinks, "Reliable estimates of individual students' fitness for college work are obviously important in determining whether or not they should be admitted." Then he says, "If an institution finds it unwise to admit more than a certain number of candidates, it must be able first of all to justify its selections upon intellectual standards." A more definite stand is taken by Byrns³, who raises another question by asking, "Is it possible for the boy who rates low in a standard psychological or college aptitude test and who gets low grades in high school to succeed in college work? Does the young man of great aptitude always win the best grades in college?" She believes, "Recognition of the relationship that exists between the quality of achievement in high school and in college work is

1. Givens, Op. cit., p. 112

2. Crawford, A. B., "Forecasting Freshman Achievement," School and Society, January 15, 1930. pp. 125-132

3. Byrns, Ruth, "Predicting College Success by High School Grades," The Nation's Schools, July, 1932. p. 30

one step toward constructive guidance." The same writer summarizes what has been said of the problem of guidance and suggestions for its solution when she states, "Only that advice and guidance which are built on facts can be of genuine value to the individual and to the educational system."

The second part of the literature in the field under investigation deals with records and their statistical treatment. In particular as Pettengill¹ states, "Two factors which are more or less universally considered in admitting and counseling college freshmen are scores on college aptitude tests and high school records." There appears to be some disagreement as to what part of the high school and college records is most valuable for guidance. Gowen² says, ". . . . marks in different high school subjects were not very indicative of what subjects the individual would do best in college." This stand is also taken by Ferguson³ who concludes that, "Grades in secondary school are so heterogeneous that they correlate only .30 with grades in the college. When the difference between a student's average grade and the passing grade of the school is taken as the criterion, the result is also practically worthless." This statement is refuted by

1. Pettengill, True E., "Size of High School and Predictive Value of Class Rank and Aptitude Test Rank," Journal of the American Association of Collegiate Registrars, April, 1934. p. 190
2. Gowen, J.W. and Gooch, M., "The Mental Attainments of College Students in Relation to Previous Training," Journal of Educational Psychology, November, 1925. pp. 547-568
3. Ferguson, George O., "Some Factors in Predicting College Success," School and Society, April 29, 1933. p. 566

Gladfelter¹ when he asserts, "There is a correlation of .68 between the numerical high school average, when all major subjects are considered, and the average grade made at the end of the Freshman year." He further states that the correlation between high school English and Freshman English is .59, and the correlation between the high school average and the American Council Psychological Test is .58. Likewise Edds² finds, "Intelligence correlates .502 with the composite of first semester marks."

The Research Bulletin of the N.E.A.³ mentions as facts taken into account in counseling, "(1) scores from tests given in connection with college entrance (2) teachers marks which the student received on related high school subjects (3) scores on achievement tests given in high school (4) age (5) general intelligence." The same Bulletin⁴ reports that, "The importance of records and reports is brought out repeatedly in this review of guidance procedures." So far as the predictive value of records as used is concerned, Reitz⁵ says, "...after

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1. Gladfelter, Millard E., "The Value of Several Criteria in Predicting College Success," Journal of the American Association of Collegiate Registrars, April, 1936. p.187
 2. Edds, J. H. and McCall, W.M., "Predicting the Scholastic Success of College Freshmen," Journal of Educational Research, October, 1933. p. 128
 3. Givens, op. cit., p. 90
 4. Givens, op. cit., p. 113
 5. Reitz, Wilhelm, "Predicting College Achievement with Marks and Ranks Adjusted for Inter-High School Variability," Journal of the American Association of Collegiate Registrars, April, 1934. p. 181

all some of these traditional standards for selecting good student material make, in reality, only a small contribution in the determination of college achievement. While. . .this is in part due. . ., the writer is rather inclined to believe that actual absence of relationship between these measures and college success is the fundamental trouble."

Just what records may be used in predicting the success of high school graduates is a controversial point. Gladfelter¹ says that, "The unit and subject mark have given way to such factors as rank in class, ratings on intelligence, psychological and achievement tests." Thurber² thinks, "Whatever evidence there is seems to indicate again that the ranking based on secondary school marks is of more import than the psychological test rankings." Newsom³ states, ". . .a good high school record, regardless of the pattern of subjects taken, when combined with a standard intelligence test score, is the best basis for selecting candidates for college admission." The same author⁴ says, "The investigation of

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1. Gladfelter, Millard E., "Status and Trends of College Entrance Requirements," The School Review, December, 1937. p. 747
 2. Thurber, C.H., "Is Scholarship Ranking Useful for Prediction?" School and Society, March 11, 1933. p. 328
 3. Newsom, N.W. and Sturm, M.M., "Comparison of the College and High School Marks for Non-Graduating College Students," Journal of the American Association of Collegiate Registrars, April, 1937. p. 217
 4. Newsom, op. cit., p. 217

Garrett concluded from a study of 324 records that results during the last two years of high school were superior as a basis for predicting college success, while certain subjects such as English and Mathematics, had greater predictive value." Newsom¹ further deduces that, "The results that Douglass obtained showed that the best single type of predictive data is the average high school marks; the score on an intelligence test is the only other factor which increased the accuracy of the prediction." The same writer² concludes, "Since the students achieved on an average approximately one grade lower in college than in high school, it is likely that all students who enter college with a high school average of C or lower will not attain the scholastic standing of C or better in college, which is generally required for continuance in college. The failure of colleges to require such standards is probably the cause of a large percentage of student mortality." On the same topic Segal³ asserts, "For the school where a grade of C must be maintained in order to insure graduation, the C grade is the basis for considering whether the student is a success as to whether he can maintain an average of C."

Byrns⁴ says, "Thus a low score in the psychological test

1. Newsom, op. cit., p. 218

2. Newsom, op. cit., p. 221

3. Segal, op. cit., p. 15

4. Byrns, op. cit., p. 30

promises poor college work much more certainly than a high score promises success." A more optimistic view is taken by Johnston¹ in speaking of certain data which, ". . . showed that college scholarship could be predicted with a high degree of success from high school percentile rank and the college aptitude test." But Segel² thinks, "However, from the evidence collected to date there seems to be no reason for changing our criterion of college success from scholarship in the college subjects to length of stay in college." The scholarship should be that of the freshman year, for as Zorbaugh³ states, "A certain grade-getting ability seems to accrue to the student by virtue of his experience or orientation as he progresses in college." In ranking the merits of different items of the records Pettengill⁴ believes, "The rank in high school graduating class is statistically a more reliable index than the college aptitude test for the prediction of freshman scholarship. The aptitude test apparently does not add anything to the reliability of prediction." In referring

1. Johnston, op. cit., p. 731

2. Segel, op. cit., p. 7

3. Zorbaugh, Grace S.M. and Kuder, G. F., "College Grades and the Vocational Motive," School and Society, July 10, 1937. p. 63

4. Pettengill, True E., "Comparison of the College Aptitude Test and Rank in High School Graduating Class as Factors for Predicting Freshman Scholarship," Journal of the American Association of Collegiate Registrars, April, 1936. p. 203

to the same measure Tuttle¹ says, "As with other predictive measures, doubtless the rank in high school class loses some of its value in the middle groups." Eells² argues, "As one of the most significant indices of success of a school's product. . .average percentage of hours of work failed during the first year or semester of their attendance."

The opinions of other writers seem to be at variance. All of the ideas suggested by the writers quoted cannot be used in measuring the success of L.M.H.S. graduates at the U. of L.; therefore, we shall choose the items best suited to the data.

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1. Tuttle, C.P., "The Predictive Value of Rank in High School Graduating Class," Journal of the American Association of Collegiate Registrars, January, 1937. p.116
 2. Eells, op. cit., p. 295

Chapter III

THE L.M.H.S. BACKGROUND OF
421 U. OF L. STUDENTS

III

THE L.M.H.S. BACKGROUND OF
421 U. OF L. STUDENTS

Historical Foreword.¹ "Although based on a former academic institution, the Louisville Male High School, as such, was first opened in 1856, at Ninth and Chestnut. After about forty years of honorable achievement it was moved in 1894 to the site now occupied by the Theodore Ahrens Trade School, on First Street near Chestnut.

"In 1915 L.M.H.S. was consolidated with the duPont Manual Training High School. The present building at Brook and Breckenridge, erected at a cost of over a quarter of a million dollars, was occupied in the fall of that year.

"For four years it was known as the Louisville Boys' High School. At the end of that time the two schools were again separated and shortly after that the old name was restored.

"The entire history of the school from its beginning is the story of a continuous effort to adjust itself to the needs of the community. Founded at a time when the ideal of education was an essentially aristocratic ideal of bookish culture to prepare its students for the learned professions,

1. Fifteenth Edition of the Louisville Male High School
'H' Book. p. 9

it began early to modify this ideal as the situation demanded. Beginning with the old classical curriculum, it gradually added the scientific branches, physical training, athletics, modern languages, business courses, music, art, and military training. The school was not to be considered a repository of arbitrary standards by which the pupil was to be measured, and then discarded as unfit, or told there was nothing for him. On the contrary, it was to be a place where he would be taken as he was, given anything he could absorb, trained to perfect whatever abilities he had, and sent forth as a useful member of society, prepared to make his individual contribution to the social projects of the community.

"The scientific subjects were introduced in 1869, physical training (in a mild form) in 1872, and freehand drawing in 1881, later becoming manual training and causing the founding of a separate school - duPont Manual Training High School. In 1896 there was military drill.

"In 1898 a Commercial High School was organized, whose boys were transferred to Male High about ten years later. All these subjects have steadily developed, along with clubs and other extra-curricula activities in order to give ever increasing opportunities to all types of students."

At the present time the personnel of the Louisville Male High School includes a principal, a student counselor,

forty-nine teachers, three instructors in the R.O.T.C., and a student body of about fifteen hundred boys.

From 1919 to 1932 the course of studies was divided into a Classical Course, a Scientific Course, a Commercial Course, and a General Course. In 1932 a course of majors and minors was instituted, which course is in effect at the present time.

Chapter 3 presents the high school background of L.M.H.S. graduates entering the U. of L. from the fall of 1930, to February, 1934, inclusive, a total of ten graduating classes. Of the 1511 boys graduating in the ten classes 436, or 29%, have matriculated in the College of Liberal Arts of the University of Louisville; 405, or 27%, have attended other colleges and universities; and 670, or 44%, have not attended any institution of higher learning. There has been a representative group at the U. of L., the study of whose success by classes should yield worthwhile data. We shall consider in this chapter the high school records of these graduates. This will serve as the high school background of the student.

We shall first consider by classes the percentages of the graduates who entered the U. of L., who entered other colleges, and who did not attend any college after graduation from high school. The percentages are given only to the nearest unit since no particular end would be served by greater

accuracy. The three categories used were determined by records of the L.M.H.S., according to the transcripts asked for by various institutions. Since the great majority of colleges require such transcripts, we feel that this is a sound assumption for so grouping the graduates. A check of the records at the U. of L. refined this classification to such a degree that any error would be slight. This system of compiling the actual number of cases for whom records are available at both institutions reduced the total number from 436 to 421. The reasons for the variations in size of the three categories used during particular years are beyond the scope of this study.

TABLE 1

PERCENTAGES BY CLASSES OF GRADUATES WHO ENTERED THE U. OF L., WHO ATTENDED OTHER COLLEGES, AND WHO DID NOT ATTEND COLLEGE

	Year of Graduation from L.M.H.S.									
	1930	1930½	1931	1931½	1932	1932½	1933	1933½	1934	1934½
Number in Graduating Class	123	114	140	105	203	136	197	122	240	133
Percentage of Grad. Entering U. of L.	27	37	24	33	34	28	23	25	30	35
Percentage of Grad. Entering Other Coll.	34	23	36	26	23	19	32	26	25	23
Percentage of Grad. Not Entering College	39	40	40	41	43	53	45	49	45	42

The percentages of L.M.H.S. students attending the U. of L. varied from 23% in 1933 to 37% in 1930 $\frac{1}{2}$; the percentages attending other colleges varied from 19% in 1932 $\frac{1}{2}$ to 36% in 1931; and the percentages who did not attend college varied from 39% in 1930 to 53% in 1932 $\frac{1}{2}$. We see that the spread in percentage for the U. of L. was 14, the spread for those attending other colleges was 17, and for those who did not enter college, 14. The highest percentage of those attending other colleges was at a time when the second smallest percentage entered the U. of L. Attendance of L.M.H.S. students was average at the U. of L. when the lowest per cent attended other colleges and when the greatest per cent did not enter college. On the other hand the lowest per cent attended the U. of L. when the third highest per cent attended other colleges and an average per cent did not enter college. The highest per cent of those entering the U. of L. (1930 $\frac{1}{2}$) came when the second lowest per cent went to other colleges and the second lowest per cent did not enter college. The fourth smallest class (1930) contained the lowest per cent of those who did not enter college, the highest per cent going to other colleges, and the fourth lowest per cent entering the U. of L. The largest class (1934) had the highest per cent of any class not entering college, an average per

cent entering the U. of L., and an average per cent going to other colleges.

We see that when a greater percentage went away to school, a smaller percentage did not enter college, but the percentage attending the U. of L. was fairly constant. When the trend was not to attend college, the number attending other schools was always below their average percentage, but the percentage attending the U. of L. did not vary as much as that of the other college group or the non-college group.

We now compare the same categories as to the high school average. The grade for graduation at L.M.H.S. is between 70% and 100%. The principal recommends for admission to college those graduates who attain an average of 85% and who desire to enter college. The majority of students have an average between 70% and 83%. In the present study the junior and senior grades only are considered in averaging, as this average satisfies the entrance requirements of many colleges.

TABLE 2
AVERAGES OF THE JUNIOR-SENIOR SCHOLASTIC
GRADES AT L.M.H.S.

Groups	Year of Graduation from L.M.H.S.					
	1930	1930½	1931	1931½	1932	
	No. Av.	No. Av.	No. Av.	No. Av.	No. Av.	
U. of L.	23 79.1	41 79.1	33 79.1	34 82.3	70 81.5	
Other Colleges	26 81.2	23 81.7	43 81.7	24 79.1	37 82.4	
Non-College	29 79.0	41 77.1	41 77.1	40 78.6	73 78.9	

TABLE 2 (continued)

Groups	Year of Graduation from L.M.H.S.									
	1932 $\frac{1}{2}$		1933		1933 $\frac{1}{2}$		1934		1934 $\frac{1}{2}$	
	No.	Av.	No.	Av.	No.	Av.	No.	Av.	No.	Av.
U. of L.	38	80.5	46	80.2	31	84.1	71	82.8	34	85.8
Other Colleges	19	83.2	51	84.2	25	84.5	38	84.4	26	84.2
Non-College	64	79.9	74	79.6	52	78.6	97	80.6	61	79.8

The range for U. of L. was from 79.1 in 1930 and 1930 $\frac{1}{2}$ to 85.8 in 1934 $\frac{1}{2}$, a spread of 6.7; for other colleges, from 79.1 in 1931 $\frac{1}{2}$ to 84.5 in 1933 $\frac{1}{2}$, a spread of 5.4; and for those who did not attend college, from 77.1 in 1930 $\frac{1}{2}$ to 80.6 in 1934, a spread of 3.5. Although the students entering the U. of L. had no high school average lower than that of those at other colleges, and the highest average was greater, the average was generally greater for other colleges. Those who did not attend college were consistently lower in their averages than either of the other groups, for in no class did their highest average reach the lowest average of the other two groups. Only in 1931 $\frac{1}{2}$ and 1934 $\frac{1}{2}$ did the average of U. of L. matriculates exceed that for other colleges, although in 1931 there was but 0.1 difference, and 1933 $\frac{1}{2}$ a difference of 0.4.

It would seem that those graduates of L.M.H.S. who receive the highest averages in their junior and senior years go to colleges other than the U. of L. The difference

even if it is positive, is not great enough for the formulation of any principle. The graduates who have the lowest averages do not attend college as a rule.

I.Q. scores are a third basis for comparison in the matter of high school records. Quite a number of I.Q. scores, however, were missing. This fact is sufficient to invalidate comparisons for the graduating classes of 1930 and 1930 $\frac{1}{2}$. The majority of the I.Q. scores were recorded from tests administered in the junior high school. The tests in L.M.H.S. were given only in special cases in which the grades received were obviously out of line with the I.Q. scores.

TABLE 3

AVERAGES OF I.Q. SCORES FOR L.M.H.S.
GRADUATES WHO ENTERED THE U. OF L.,
WHO ATTENDED OTHER COLLEGES, AND WHO
DID NOT ATTEND COLLEGE

Groups	Year of Graduation from L.M.H.S.				
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932
	No. Av.	No. Av.	No. Av.	No. Av.	No. Av.
U. of L.	4 109.3	10 122.7	21 117.4	21 110.4	58 111.2
Other Colleges	10 114.1	10 112.1	27 113.2	13 108.1	29 114.7
Non- College	8 117.4	9 113.6	22 108.5	24 102.3	53 107.2

TABLE 3 (continued)

Groups	Year of Graduation from L.M.H.S.									
	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$					
	No. Av.	No. Av.	No. Av.	No. Av.	No. Av.					
U. of L.	29 111.2	34 104.6	20 114.0	57 110.6	26 109.0					
Other Colleges	13 115.2	41 110.5	16 115.6	31 114.8	23 114.7					
Non-College	40 106.7	55 101.8	21 103.7	67 105.7	49 105.3					

The results of the averages obtained from Table 2 are corroborated by Table 3, namely, that for a comparable number of cases, the graduates of L.M.H.S. whose I.Q. scores are highest go to colleges other than the U. of L. and those with the lowest I.Q. scores do not enter college. In each case those attending the U. of L. have averages slightly lower than those attending other colleges and distinctly higher than those of graduates who do not enter college. The U. of L. attracts graduates of good scholastic standing, but not those of the highest standing. Those pupils who do not enter college are not of as high standing as those who go to college.

Rank in class also indicates the standing of the L.M.H.S. graduate. Rank in L.M.H.S. is from one, which is high, to the last number in the class. Deciles are from ten, which is high, to one which is the lowest decile. The table of ranks is given in order that a clearer idea may be obtained of the type of student who enters the U. of L.

TABLE 4
AVERAGE RANK IN GRADUATING CLASS OF
L.M.H.S. GRADUATES WHO ENTERED THE
U. of L.

Year of Graduation from L.M.H.S.										
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Average Rank of Graduate	66.2	55.6	69.6	39.9	92.1	69.9	110.7	47.0	112.2	44.7
Number in Graduating Class	123	114	140	105	203	136	197	122	240	133
Decile into which the average falls	5	6	6	7	6	5	5	7	6	7

The average rank of the graduate was never below the fifth decile. Three classes had their average in the fifth decile, four in the sixth, and three in the seventh. The figures are not unusually high, neither are they particularly low. Seven of the ten classes rank in deciles above the lower five deciles, the other three in the fifth decile. We can see from this that the average is in the upper five deciles.

One of the usual questions asked by instructors and administrators is whether students are entering college at a younger age than they did formerly. The results from five years do not answer this question conclusively, but the data

give an indication of the trend. Several graduates in each class were above the normal age because they had been compelled to suspend their education for several years. These cases, however, were so rare that their influence has but little effect upon the general average.

TABLE 5

AVERAGES OF THE AGES OF L.M.H.S.
GRADUATES WHO ENTERED THE U. OF L.,
AT THE DATE OF THEIR GRADUATION FROM
L.M.H.S.

Year of Graduation from L.M.H.S.														
1930			1930 $\frac{1}{2}$			1931			1931 $\frac{1}{2}$			1932		
Yr.	Mo.	Da.	Yr.	Mo.	Da.	Yr.	Mo.	Da.	Yr.	Mo.	Da.	Yr.	Mo.	Da.
Average														
Age at 17 10 16			18 4 1			18 0 28			18 9 11			17 8 7		
time of														
Graduation														
1932 $\frac{1}{2}$			1933			1933 $\frac{1}{2}$			1934			1934 $\frac{1}{2}$		
Yr.	Mo.	Da.	Yr.	Mo.	Da.	Yr.	Mo.	Da.	Yr.	Mo.	Da.	Yr.	Mo.	Da.
18 2 13			18 0 12			18 3 13			18 0 4			18 1 26		

From the data in Table 5 it appears that there is no especial change in age in relation to the year. The difference between the youngest and the oldest average is one year, one month, and four days, and oddly enough this difference is between successive graduating classes, those of 1931 $\frac{1}{2}$ and 1932. Another peculiarity which may be coincidental is that

the average ages are alternately younger and older, beginning with the class of 1930. This fact verified by a check of other classes, would certainly answer negatively the question as to whether boys are entering the U. of L. at a less mature age than was formerly the case.

The last table in this chapter showing the L.M.H.S. background of graduates entering the U. of L. gives the average number of credits earned by each class. This table serves only to substantiate further the comparisons which have already been made. For the purposes of Table 6 a credit is defined as a passing grade received upon the completion of a semester's study of a curriculum subject. Music, Physical Education, and R.O.T.C. service are excluded, and Typing receives but one-half a credit.

TABLE 6
AVERAGE NUMBER OF CREDITS RECEIVED IN
L.M.H.S. BY GRADUATES ENTERING THE U.OF L.

Year of Graduation from L.M.H.S.										
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Average Number of Credits Earned	34.7	34.2	34.2	33.7	33.9	33.3	33.5	33.2	32.8	33.3

The decrease in the average number of credits earned can be attributed to the change in curriculum from specialized

courses to the present system of majors and minors. The former program of studies, in force until the fall of 1932, contained more required subjects than the present program of studies does, and hence the number of electives was small. Although the number of credits required for graduation, 32, has not changed, it was not unusual for a student who was graduated as late as 1932 to earn 35 or 36 credits in academic subjects.

Summary. The greatest number of graduates did not go to college, but of those who did, the total number attending the U. of L. was greater than the total number who attended other colleges. The percentages of the numbers attending the U. of L. had a spread of 14, while those attending other colleges had a spread of 17, indicating a more constant attendance at the U. of L. The junior-senior averages and the I.Q. scores showed that the boys with the higher rating attended colleges other than the U. of L., but that the differences were not large. The high school averages and I.Q. scores of boys who did not enter college after graduation were significantly lower than those of boys entering the U. of L. The average rank of U. of L. enrollees was never lower than the fifth decile nor above the seventh decile, a fact which indicates that they were above the rank of the average graduate. The

graduates in 1934¹/₂ had an average age which was as great as, or greater than, that of those in 1930. The change in the curriculum probably caused the decrease in the average number of credits earned in L.M.H.S.

Chapter IV

THE COLLEGE BACKGROUND OF 421
HIGH SCHOOL STUDENTS

Chapter III

THE COLLEGE BACKGROUND OF 421 HIGH SCHOOL STUDENTS

Historical Foreword. The University of Louisville is a municipal university founded in 1837. It became a member of the Southern Association of Colleges and Secondary Schools in 1915, and was approved by the Association of American Universities in 1936.

The Medical School, founded in 1837, has a national prominence, and until fairly recently it overshadowed the other schools of the University. The School of Law was founded in 1846, and the Liberal Arts College in 1907, at which time there were graduate students in the College. For three years there was a School of Public Health, which was discontinued. The School of Dentistry was organized in 1918. The Summer School opened in 1922. The Speed School of Engineering was formed in 1925. The Division of Adult Education was added in 1928, and the Graduate School as such originated in 1929. The Louisville Municipal College for Negroes was put under the administration of the University in 1931. The School of Music was founded in 1932.

The College of Liberal Arts of the University of Louisville because of wise administration and a strong faculty

has emerged from the shadow of the more prominent Medical School and is rapidly becoming nationally known by its new educational policies. At the present time, 1938, there are 60 men and 15 women on the faculty of the College of Liberal Arts of the University of Louisville. Twenty-six men and 7 women are part time instructors, in the Division of Adult Education and in other branches of the University.

In 1929 the curriculum of the Liberal Arts College was changed. The list of prescribed courses for entrance was modified so as to further more complete articulation with recognized high school credits. This change was preceded by a survey, which was made by Dr. F. J. Kelly. The survey resulted in two recommendations, (1) closer articulation of freshman and sophomore years with the high school curriculum and (2) the introduction of survey courses in the first two years. In 1930, the Faculty of the Liberal Arts College studied the objectives and organization of the college, and after approval by the Board of Trustees, the organization was changed in 1933 to what is known as the Junior-Senior College Organization.

¹"The change was the more remarkable because the Liberal Arts College of the University of Louisville is a medium-sized, conservative, and financially restricted college. The

1. Oppenheimer, J. J., Chapter XI of What About Survey Courses by Johnson, B. L., pp. 130-150

college has changed radically because the philosophy of the faculty has changed. The year 1930 had the further significance for the college for it saw (1) the establishment of the office of research secretary in the office of the dean of the college; (2) the wider use of achievement tests in studying individual students and in estimating the effectiveness of instruction; (3) the encouragement of some of the faculty to reorganize established courses toward functional ends.

"The survey courses, which are the core of the junior college program, have this objective: to complete the general education of the secondary field by giving the student an overview of the nature of the modern world through better understanding of its physical and social natures. As established in the college they consist of, I. English Composition, II. Introduction to the Study of Society, III. History of Civilization, IV. Survey of the Humanities, and V. Survey of the Natural Sciences.

"Not only is the college reassured by the improvement of student achievement in the Junior College, but it is also proud of the fact that since the reorganization student mortality has decreased from 54% to 36% in the five-year period.

"The Associate in Arts degree is granted upon completion of sixty-one hours of credit and of the sophomore comprehensive examinations.

"The present policy provided for by the General Curriculum follows this general formula: (1) students of lower abilities will be encouraged to remain in the college for two years provided they make serious efforts and seem to be deriving some benefit from their college work; (2) students of average and better ability must sustain a standing of C or be penalized by being placed on probation or dropped out of school; (3) after a student has been in residence for one year and has not done satisfactory work he will be either placed in the General Curriculum or will suffer some penalty under the scholarship rule; (4) students who are definitely placed on the General Curriculum will be advised not to take courses which are definitely prerequisite to a major sequence in the Senior College."

The determination of the collegiate background of the L.M.H.S. graduates at the U. of L. is best found through comparisons of scores on placement tests, the number of semesters in attendance, the college hours earned the first, second, and fourth semesters, as well as the total number of hours, the quality points gained during the same periods, the distribution of grades, and scores on sophomore achievement tests.

The placement tests yielded fairly large numbers, sufficient in most cases for comparisons. The exception was

1930, when the number of cases was too meager to warrant comment. The tests in Contemporary Affairs have been given only since 1936. The Language Tests are never given in terms of percentiles; the other tests are.

TABLE 7

AVERAGES OF SCORES MADE BY L.M.H.S.
GRADUATES ON U.OF L. PLACEMENT TESTS,
GIVEN BY PERCENTILES

Placement Tests at U.of L.	Year of Graduation from L.M.H.S.									
	1930		1930 $\frac{1}{2}$		1931		1931 $\frac{1}{2}$		1932	
	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile
Psycholo- gical	16	53	38	57	30	51	33	49	69	52
English			36	51	31	46	33	44	68	47
Reading					31	55	33	49	68	56
	1932 $\frac{1}{2}$		1933		1933 $\frac{1}{2}$		1934		1934 $\frac{1}{2}$	
	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile
Psych.	35	47	41	49	29	63	67	54	32	56
English	36	42	42	44	31	62	67	51	32	55
Reading	33	49	40	41	31	61	67	47	31	50

The range of comparable scores for the tests is in order of magnitude: for Reading, 23; for English, 20; and for the Psychological Test, 16. The range appears to be unusually large, but for the majority of classes the scores are grouped fairly closely about the fiftieth percentile. Table 7 indicates

only fairly noticeable correspondence between the L.M.H.S. average rank in the graduating class and scores on placement tests. The class of 1930 $\frac{1}{2}$ had an average for all three tests above the average of most of the classes. Table 2 indicates the high school average of the 1930 $\frac{1}{2}$ class was below the scholastic average of most of the classes. The averages of the class of 1931 $\frac{1}{2}$ were lower for all tests than the averages for most of the classes, but the scholastic average was above the scholastic average for most of the classes. The averages for the class of 1933 $\frac{1}{2}$ were high both for the Placement Tests and the scholastic average. The correspondence between the two criteria is only fairly good. The predictive value of Table 2 and Table 7 is not high.

We start with the average number of semester hours earned, to answer the question whether the first semester or the first year of college work is more difficult for the L.M.H.S. graduate at the U. of L. than the second year. The records at the U. of L. are complete in this respect, and in a form easy to use. The records for the first year (by semesters) show the number of hours that were earned by each boy who entered. Withdrawal during the first semester for whatever reason gives the graduate a total of zero hours. The guidance as to which courses are to be taken or the number of courses attempted, has been disregarded, the records of semester hours governing the computations

for Table 8. Withdrawals with possibility of passing bring down the totals, but for the purposes of comparison tend to be distributed over the entire group.

TABLE 8

AVERAGES OF THE NUMBER OF HOURS EARNED
THE FIRST YEAR IN THE U. OF L. BY
L.M.H.S. GRADUATES

Number of Hours Earned	Year of Graduation from L.M.H.S.									
	1930		1930 $\frac{1}{2}$		1931		1931 $\frac{1}{2}$		1932	
	No.	Av.	No.	Av.	No.	Av.	No.	Av.	No.	Av.
First Semester	23	13.3	41	11.5	33	12.7	34	14.1	70	12.1
Second Semester	20	13.1	35	12.6	31	12.0	29	13.5	52	12.2
	1932 $\frac{1}{2}$		1933		1933 $\frac{1}{2}$		1934		1934 $\frac{1}{2}$	
	No.	Av.	No.	Av.	No.	Av.	No.	Av.	No.	Av.
First Semester	38	11.6	46	12.0	31	11.7	71	11.5	34	14.0
Second Semester	32	12.2	38	12.3	20	13.7	51	13.5	28	13.9

The first five classes during the first semester gained a higher average number of credits than the second five classes during the first semester. The reverse of this condition was true for the second semester. The individual graduates may have elected a different number of hours and yet have been

successful in the number of hours taken. The data of Table 8 should not be used for prognostic purposes, but should serve only as an indicator of the range of hours earned. The average number of hours earned was larger the second semester than the first semester. The withdrawals at the end of the first semester may be the causal factor. The articulation between the data of Table 6 and the data of Table 8 appears to be slight. The number of credits earned in L.M.H.S. seems to be no criterion by which to predict the probable number of hours earned the first or second semesters at the U. of L.

The number of hours for the third semester was not taken, but the total number for the four semesters was averaged. The number of cases for the fourth semester and for the four semesters was less than the number in the previous table, and by the same token was more selective. A greater load might be carried, a measure, which as a prognostic factor, would be to some extent neutralized by the greater possibility of failure. The reduced number of cases indicates the mortality.

TABLE 9

AVERAGES OF THE NUMBER OF HOURS EARNED THE FOURTH
SEMESTER IN THE U. OF L. BY L.M.H.S. GRADUATES
AND AVERAGES OF THE TOTAL NUMBER OF HOURS EARNED
IN FOUR SEMESTERS

Number of Hours Earned	Year of Graduation from L.M.H.S.									
	1930		1930 $\frac{1}{2}$		1931		1931 $\frac{1}{2}$		1932	
	No.	Av.	No.	Av.	No.	Av.	No.	Av.	No.	Av.
Fourth Semester	17	14.2	23	13.9	22	14.5	20	13.7	35	12.8
During Four Semesters		56.6		59.4		60.5		57.8		52.6

The first five classes earned a greater average number of hours during the fourth semester than did the second five classes. The general average for all classes was higher than the general average for either the first or second semester. The mortality was between forty and fifty per cent for the number of students who enrolled and the number who completed four semesters. The establishment of the Junior-Senior College Organization may reduce the mortality. The selectivity of

the group completing four semesters tends to increase the average of semester hours earned. Since 120 hours are usually required for graduation, the averages for four semesters are fairly well up to normal expectancy. The fact that the load is heavier the second year does not necessarily mean that the program is more difficult.

The averages of the quality points gained during the same periods as the semester hours earned will serve as another basis of determining success of the graduates. Should the averages seem unusually low, it must be remembered that withdrawals while failing are given negative credit. The numbers of cases in each class are not given since they are identical with those of Table 8. One quality point is awarded for each semester hour carried with the grade of C, two quality points for each semester hour carried with the grade of B, etc.

TABLE 10

AVERAGES OF THE NUMBER OF QUALITY POINTS EARNED
THE FIRST AND SECOND SEMESTERS BY L.M.H.S.
GRADUATES AT THE U. OF L.

Average Number of Quality Points Earned	Year of Graduation from L.M.H.S.									
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
First Semester	12.9	8.2	13.4	14.4	10.8	9.3	10.9	11.6	15.4	15.4
Second Semester	13.8	10.9	12.5	13.4	11.8	10.5	11.1	15.7	12.1	16.7

Seven of the ten classes gained more quality points the second semester than they did the first semester. A comparison of Table 8 with Table 10 indicates the fact that there is no pattern for the ten classes. The average number of semester hours does not seem indicative of the average number of quality points. This condition prevails for the second semester. The heavier load carried the second semester is probably responsible for the greater number of quality points earned the second semester. The number of withdrawals at the end of the first semester may have had some effect.

The effect of withdrawals can be seen by the averages of the quality points for the fourth semester and for the four semesters. The load for the fourth semester was heavier than the load for either the first or second semester. The number of cases is the same as the number of cases in Table 9.

TABLE 11
AVERAGES OF THE NUMBER OF QUALITY POINTS
EARNED THE FOURTH SEMESTER BY L.M.H.S.
GRADUATES AT THE U. OF L., AND AVERAGES
OF THE TOTAL NUMBER OF QUALITY POINTS
EARNED DURING FOUR SEMESTERS

Average No. of Quality Points Earned	Year of Graduation from L.M.H.S.									
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Fourth Semester	12.3	15.7	19.1	17.6	15.8	13.9	16.0	15.1	15.1	16.7
During Four Semesters	50.6	63.9	77.3	63.8	68.6	61.0	58.4	73.9	62.4	77.2

Eight classes had a higher average in quality points the fourth semester than they did the first semester, and the advantage over the second semester was seven to two. Since this was also true of the averages of semester hours, we may say that the heavier the load the greater the number of quality points. The majority of classes had a larger number of quality points for four semesters than they had semester hours. The averages for the four semesters seemed extraordinary, but upon rechecking the data, it then appeared peculiar that they were not higher, for when students gain as many as 217, 196, 187, or 183 quality points in four semesters, the averages must indeed be low of some.

The success of the average L.M.H.S. graduate at the U. of L. may be indicated by a combination of the number of semester hours earned with the number of quality points gained. This combination is made by quality points standings, which are obtained by dividing the number of quality points by the number of semester hours.

TABLE 12

QUALITY POINT STANDING OF L.M.H.S. GRADUATES
AT THE U. OF I. THE FIRST, SECOND, FOURTH,
AND TOTAL OF FOUR SEMESTERS

Semester at the	1930	Quality Pt.	St. of L.M.H.S. Grads.						
U. of L.	No. St.	No. St.	No. St.	No. St.	No. St.	No. St.	No. St.	No. St.	No. St.
First	23 .969	41 .713	33 1.055	34 1.021	70 .892				
Second	20 1.053	35 .865	31 1.417	29 .993	52 .967				
Fourth	17 .866	23 1.129	22 1.319	20 1.285	35 1.234				
Total of Four	17 .894	23 1.076	22 1.278	20 1.104	35 1.304				
	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$				
	No. St.	No. St.	No. St.	No. St.	No. St.				
First	38 .801	46 .825	31 .990	71 1.339	34 1.100				
Second	32 .861	38 .903	20 1.146	51 .897	28 1.202				
Fourth	20 1.053	24 1.203	13 1.134	34 1.078	14 1.210				
Total of Four	20 1.087	24 1.075	13 1.301	34 1.070	14 1.343				

The data of Table 12 indicate the fact that four classes attained a C average, that is, a quality point standing of 1.0, the first semester; four, the second semester; nine, the fourth semester; and nine, the total of four semesters. Eight classes had a higher standing the second semester than they had the first semester. Eight classes had a higher standing the fourth semester than they had the first semester. Seven classes had a

higher standing the fourth semester than they had the second semester. Since .80 and 1.4 are taken as the limits of the second quartile at the U. of L., the data show one class ($1930\frac{1}{2}$) with a quality point standing in the lowest quartile the first semester. All other quality point standings are in the second quartile.

The averages of quality points and semester hours show the success of the average student but do not indicate correspondence between L.M.H.S. grades and the U. of L. grades. The success of the L.M.H.S. quartile groups at the U. of L. will be shown by their distribution according to quality point standing. Quality point standing is obtained by dividing the number of quality points gained by the number of semester hours earned. The two upper quartiles of L.M.H.S. graduates receive grade averages from 85% to 100%.

TABLE 13
QUARTILE DISTRIBUTION OF L.M.H.S. GRADUATES
ACCORDING TO QUALITY POINT STANDING THE
FIRST SEMESTER AT THE U. OF L.

Quartile at L.M.H.S.	Quality Point Standing at U. of L. the First Semester		2 or above		2 - 1		1 - 0		Negative		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fourth	24	6	25	6	1		1				51	12
Third	12	3	35	8	17	4	2				66	15
Second	1		57	13	96	23	30	7			184	43
First	1		12	3	50	12	57	13			120	28
Total	38	9	129	30	164	39	90	20			421	100

The data of Table 13 indicate that 38 attained a quality point standing of 2 or above, 36 of whom had a scholastic average of 85% or above. Two graduates, whose scholastic average was below 85%, attained a collegiate standing of B or better. Ninety had a failing collegiate average, and of this number only 3 had a scholastic average of 85% or better.

Thirty per cent had a quality point standing of C, 14% of whom had a scholastic average of 85% or better, and 16% an average below 85%. Thirty-nine per cent averaged D in the U. of L., 4% of whom averaged 85% or above in L.M.H.S., and 35% averaged 85% or above.

Fifty-one students were in the highest quartile at L.M.H.S. only two of whom had a quality point standing of less than C at the U. of L. Fifteen per cent were in the third quartile, 11% of whom attained C or better. Forty-three per cent were in the third quartile, 30% of whom gained a quality point standing of less than C. Twenty-eight per cent were in the lowest quartile at the L.M.H.S., 25% of whom had a collegiate average of less than C.

Theoretically, all boys who failed at the U. of L. would be expected to come from the lowest quartile at the L.M.H.S. Eight per cent of the failures, however, were from other quartiles. The divisions of the graduates by quartiles and by quality point standings are not similar, and the degree of

correspondence is not shown by this table. Table 13 has a fair predictive value.

TABLE 14

NUMBER OF CHANCES IN 100, OF L.M.H.S.
GRADUATES ATTAINING CERTAIN QUALITY
POINT STANDINGS THE FIRST SEMESTER AT
THE U. OF L.

Quartile at L.M.H.S.	Chances in 100 of Graduates Attaining Quality Point Standings			
	2 or above	2 - 1	1 - 0	Negative
Fourth	47	49	2	2
Third	18	53	26	3
Second	.5	31	52	16.5
First	1	10	42	47

A graduate in the fourth quartile at L.M.H.S. has 47 chances in 100 of attaining an average of B or above at the U. of L., and he has 96 chances in 100 of attaining an average of C or above. A graduate in the third quartile has 71 chances in 100 of attaining an average of C or above, and 26 chances of having a D average. A graduate in the second quartile has one chance in 200 of attaining an average of B or above, 31.5 chances in 100 of attaining an average of C or above, and 16.5 chances in 100 of failing. A graduate in the lowest quartile has almost an equal chance to fail as he has to pass. A boy above the second quartile has 73 chances in 100 of attaining an average of C or above. A boy below the third

quartile has 79 chances in 100 of having an average below C.

The distribution of the graduates according to the number of semesters in attendance may answer the question as to when students drop out. The class of 1934 $\frac{1}{2}$, of course, will not graduate till January, 1939. The data were taken in the summer of 1937, the effect of which fact would be to allow the class of 1934 $\frac{1}{2}$ an opportunity to attend the U. of L. five semesters; the class of 1934, six semesters; 1933 $\frac{1}{2}$, seven; and the class of 1933 would have been the last class with sufficient time to complete eight semesters.

TABLE 15
QUARTILE DISTRIBUTION OF L.M.H.S. GRADUATES
ACCORDING TO NUMBER OF SEMESTERS ENROLLED AT
THE U. OF L.

		Year of Graduation from L.M.H.S.										
No. Quar-												
Sem. tile												
at at												
U.of L.M.		1930 $\frac{1}{2}$	1931 $\frac{1}{2}$	1932 $\frac{1}{2}$	Tot.	1934						
L. H.S.		1930	1931	1932	1933	1933 $\frac{1}{2}$	1934 $\frac{1}{2}$					
8	4th	1	2	3	2	3	2	15	-	-	-	
	3rd		1		2	1	4	8	-	-	-	
	2nd	2	3	4	1		2	13	-	-	-	
	1st	2	2	1	2		1	8	-	-	-	
	Tot.	5	8	8	7	4	9	44	-	-	-	
7	4th								4			
	3rd								2			
	2nd		1			1		3				
	1st		1	1	1			3				
	Tot.		2	1	1	1	1	6	6			
6	4th			1	1	4	1	7		4		
	3rd	1		2	3	6	2	14	1	7		
	2nd		1	3	4	5	1	21		10		
	1st	3	2	1	1	2		9	2			
	Tot.	4	3	7	9	17	3	51	3	21		
5	4th					1	1	2			2	
	3rd					1	1	2		1	3	
	2nd	1	4			1	1	9	1	3	1	
	1st	2	1	1	2		1	8				
	Tot.	3	5	1	2	3	3	21	1	4	6	
4	4th			2	1		1	4		1	4	
	3rd	1				1		4	1	4	2	
	2nd	3	3			4	3	15	1	3	1	
	1st	1	1	3	2	3	1	14			1	
	Tot.	5	4	5	3	8	4	37	2	8	8	
3	4th				1			1	1		1	
	3rd				1			1			2	
	2nd	1	1	2	3	4	4	18	1	1	3	
	1st		2	1	1	5	4	14	2	2	1	
	Tot.	1	3	3	6	9	8	34	4	3	7	
2	4th					1		1	1	1		
	3rd				1			1	1	2	3	
	2nd		4	1	3	8	3	22	2	9	4	
	1st	2	6	5		1	3	24		2		
	Tot.	2	10	6	4	10	6	48	4	14	7	
1	4th								1	1		
	3rd		1			1		2	1	3	1	
	2nd		3		2	9	4	21	7	11	3	
	1st	3	2	2		8	1	21	2	6	2	
	Tot.	3	6	2	2	18	5	44	11	21	6	
Total		23	41	33	34	70	38	285	31	71	34	

Table 15 shows that L.M.H.S. students of the third and fourth quartiles tend to remain in the U. of L. longer than do the pupils of the first and second quartiles. In the classes studied, the boys of the first quartile dropped out in large numbers the first term, and, in succeeding terms, continued to drop out by large percentages, though the numbers decreased as the groups grew smaller. Thirty-one students out of the total number of 120 of the first quartile remained one term only; 26 remained two; 19, three; 15, four. At the same time out of a total number of 184, the second quartile lost, also in decreasing numbers, 42, 37, 23, and 20. No such scheme appeared in the losses from the third and fourth quartiles, the numbers running 7, 3, 3, 11 for the students of the third quartile and 2, 3, 3, 9 for students of the fourth out of total numbers of 66 and 51, respectively. Seventeen of the total number who remained in the U. of L. four terms or less, were from the fourth quartile, 28 from the third, 122 from the second, and 91 from the first. While approximately 4.7 times as many students from the first and second quartiles as from the third and fourth remained two years or less, the percentages from the lower quartiles were greater in proportion during the first, second, and third terms than were percentages of losses from the upper quartiles.

The first and second quartiles lost the following numbers: 73 of the total of 82 students remaining only one term, or approximately eight times as many students as were lost by the third and fourth quartiles; 63 of the 73 remaining two terms, a little more than six times as many; 42 of the 48 remaining three terms, about six times as many; but only 35 of the 55 remaining four terms, just one and three-fourths times as many. The dropping out of a larger percentage of lower than of upper quartile students confirms what we should expect.

The percentage of I.M.H.S. students remaining two years or less tends to increase. A study of the numbers remaining one year or less indicates an irregular trend for the first six classes, then a consistently large loss from each of the last four classes. In the first class studied, 1930, 5 out of 23 students, approximately 22%, remained at the U. of L. two semesters or less, while the last class, 1934 $\frac{1}{2}$, lost 13 of 34, or 38%. The class of 1931 $\frac{1}{2}$ lost only 6 of 34, or 18%; but the classes of 1933 $\frac{1}{2}$ and 1934 lost 15 of 31, or 48%, and 35 of 71, or 49%, respectively.

The tendency for student mortality to increase in recent years is seen again in the figures for four terms. The class of 1930, by the end of the sophomore year, lost 11 of 23 students, or 48% of the total; the class of 1934 $\frac{1}{2}$ lost 28 of

34, or 82%. Other classes showed losses as low as 44%, or 15 students out of 34 for the class of 1931 $\frac{1}{2}$, and losses as high as 67%, or 21 students out of 31, for 1933 $\frac{1}{2}$, the class that showed the percentage next to the highest figure, that of 82% in 1934 $\frac{1}{2}$. L.M.H.S. does not have as great a chance of success as formerly, as far as duration of stay is concerned.

The increasing losses during the first and second years may be accounted for by a variety of factors. One cause not to be overlooked is the possible effect of the reorganization of the high school curriculum, which took place in 1932, permitting a student to graduate from high school with majors and minors largely of his own choosing as opposed to the former method of a prescribed college preparatory course. Another possible explanation may be found in the stricter grading in college in recent years. Still another reason may be an economic one and may have some connection with the fact that the majority of L.M.H.S. boys are enrolled in high school in the R.O.T.C. unit and are outfitted with uniforms, shirts, and caps. This aid may make the burden of outfitting themselves in college an increasingly difficult one for L.M.H.S. graduates. Causes intangible as well as tangible play a part in the success of students in college. The chances are that the combination of causes differs greatly for individuals.

The most that can be done here is to show what chances the average boy, or better still, the student in each of the L.M.H.S. graduating quartiles, has for success in the U. of L.

Table 16 and Table 17, based on Table 15, show by totals in quartile ranking, more clearly than can Table 15 show by years, the chances of success that graduates will have as measured by length of stay. The figures for Table 16 were compiled from seven L.M.H.S. graduating classes, 1930 through 1933, and included 285 students enrolled at the U. of L. for eight semesters or less.

TABLE 16

NUMBER OF CHANCES IN 100 OF L.M.H.S. GRADUATES
REMAINING ONE TO EIGHT SEMESTERS AT THE U. OF L.
BASED ON LENGTH OF STAY AT THE U. OF L. OF 285
STUDENTS IN SEVEN GRADUATING CLASSES FROM 1930
THROUGH 1933

Quartile at L.M.H.S.	8	7	6	5	4	3	2	1
Fourth	50	0	23	7	13	3	3	0
Third	25	0	44	6	13	3	3	6
Second	11	2	17	7	12	15	18	18
First	8	3	9	8	14	14	23	21

Table 16 indicates that graduates of the third and fourth quartiles, who enter their fourth year at the U. of L., are

not likely to drop out during the senior year but will continue through the eighth semester. The chances are that only 2 in 100 of the second quartile and 3 in 100 of the first quartile who reach the seventh semester will fail to continue. The figures regarding the lower quartiles may seem unusually small, but the fact must be borne in mind that the mortality of students of the two lower quartiles is very heavy in the freshman and sophomore years.

L.M.H.S. graduates of the fourth quartile have 50 chances in 100 of completing eight semesters and 73 chances in 100 of completing six semesters. Compared to fourth quartile students, only one-half as many students of the third quartile are likely to remain eight semesters, although 69 in 100 of the third quartile will complete their junior year, almost as large a percentage as for the fourth quartile. Students of the second quartile have 11 chances in 100 of completing eight semesters, that is, less than one-half as many chances as students of the third quartile and less than one-fourth as many chances as students of the fourth quartile. Students of the first quartile have 8 chances in 100 of remaining through the senior year, or less than one-third as many chances as graduates of the third quartile and less than one-sixth as many chances as graduates of the fourth quartile.

The chances are that no graduate of the top quartile will drop out at the end of his first semester and only 6 out of 100 of the third quartile will fail to continue, but 18 out of 100 and 21 out of 100 of the second and first quartiles, respectively, will fail to complete more than one semester. The chances are that comparatively few L.M.H.S. graduates of the upper quartiles will drop out at the end of the first or even the second year, while a noticeably large number of the lower quartiles will not survive. The chances are that only 3 of 100 in the fourth quartile will stop at the end of the first year, and 19 of 100 at the end of the second year. Students of the third quartile will likely lose 9 of 100 at the end of the first year, and 25 of 100 at the end of the second. On the other hand, 36 of 100 students of the second quartile will be lost the first year, and 63 of 100 the second, while 44 of 100 of the first quartile will go the first year and 72 of 100 the second.

TABLE 17

NUMBER OF CHANCES IN 100 OF L.M.H.S. GRADUATES
REMAINING ONE TO FOUR SEMESTERS AT THE U. OF L.
BASED ON LENGTH OF STAY AT THE U. OF L. OF 258
STUDENTS IN TEN L.M.H.S. GRADUATING CLASSES
FROM 1930 THROUGH 1934 $\frac{1}{2}$

Quartile at L.M.H.S.	Number of Semesters at the U. of L.			
	4	3	2	1
Fourth	53	18	18	11
Third	39	11	25	25
Second	17	19	30	34
First	16	21	29	34

Table 17 indicates, according to quartile ranking, the chances that L.M.H.S. graduates have of remaining at the U. of L. through four semesters. The figures were compiled from ten L.M.H.S. graduating classes, 1930 through 1934 $\frac{1}{2}$, comprising a total of 258 students enrolled at the U. of L. for four semesters or less. Table 17 shows more clearly than could Table 15 the fact that the chances are distinctly in favor of students of the upper quartiles remaining at the U. of L. a longer time than do students of the lower quartiles. Students of the fourth quartile have 53 chances in 100 of remaining four semesters and just 11 chances in 100 of dropping out after one term. Boys of the first quartile, on the other hand, have just 16 chances in 100 of remaining four terms and 34 chances in 100 of remaining only one semester. Chances for the second quartile are remarkably similar to those of the first. Thirty-four students in 100 are likely to remain one semester and only 17 four semesters. Students of the third quartile are more likely to remain four terms than are students of the lower quartiles; in fact, the former have more than twice as many chances of remaining two full years.

Sophomore Comprehensive Tests are administered upon the completion of the fourth semester for purposes of predicting future success in light of past performances. During some years the data were numerous for some particular tests but meager for

others. The averages in Table 18 are given in percentiles, which are comparative with national percentiles for the years of 1932-1934 $\frac{1}{2}$ inclusive. A percentile of 63 during this period indicates that such an average was 13 percentiles above the average for the nation's liberal arts colleges, tested. The variations in the numbers tested are caused by subsequent testing of some who omitted certain tests. Other students did not take these tests because of withdrawal.

TABLE 18
AVERAGES OF THE PERCENTILES ACHIEVED BY L.M.H.S.
GRADUATES ON THE SOPHOMORE COMPREHENSIVE TESTS
AT THE U. OF L.

Sophomore Compre- hensive Tests	Year of Graduation from L.M.H.S.									
	1930		1930 $\frac{1}{2}$		1931		1931 $\frac{1}{2}$		1932	
	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile
His. S.S.	2	79	3	47	2	50	14	59	27	65
For. Lit.			3	39	2	58	6	44	6	73
Fine Arts			3	21	2	63	7	49	6	65
Tot.Gen.Cul.	3	55	10	51	18	62	8	54	6	75
Total Eng.	2	44	3	34	2	27	13	40	26	61
Lit. Acq.	3	56	11	57	17	64	11	56	5	74
Gen. Sci.	5	44	12	63	20	63	20	57	26	80
Wld. Hist.	2	72	3	47	2	55	9	38	6	56
Cont. Aff.	2	97	3	45	2	62	13	58	26	76
	1932 $\frac{1}{2}$		1933		1933 $\frac{1}{2}$		1934		1934 $\frac{1}{2}$	
	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile	No.	%-ile
His. S.S.	12	60	17	65	11	83	28	71	12	80
For. Lit.	8	64	17	60	11	65	28	84	12	75
Fine Arts	8	74	17	60	11	55	29	58	12	67
Tot.Gen.Cul.	8	65	17	63	11	72	28	69	12	79
Total Eng.	12	51	17	50	10	56	28	51	12	59
Lit. Acq.	8	58	17	50	10	48	29	54	12	61
Gen. Sci.	11	70	17	54	10	66	27	65	12	63
Wld. Hist.	10	53	17	50	10	71	29	65	12	75
Cont. Aff.	12	76	17	62	10	77	29	79	12	78

The results are pleasing for they compare very favorably with the national percentiles on these tests. In particular the classes of 1934¹/₂ and 1932 were outstanding, for each had but one average below the sixtieth percentile, the one being World History in 1932, and Total English in 1934¹/₂. The averages for General Science seemed very high throughout the last nine classes. The averages for Contemporary Affairs were well above the fiftieth percentile, as were the averages for Foreign Literature. The highest average for more than ten cases was 84 in Foreign Literature in 1934. More students were tested in the later classes, and there seems to be a higher average.

Summary: The scores made by L.M.H.S. graduates on the U. of L. Placement Tests corresponded roughly with high school grades when averages of the two measures were taken. The graduates were approximately four percentile points above the median for all tests. The averages of the hours earned the first, second, and fourth semesters indicated that a heavier schedule was carried in successive semesters. Withdrawal of weaker students was probably the reason for a higher average of quality points gained in successive semesters by students who remained at the U. of L. The data indicated the fact that students who attended the U. of L. four semesters obtained a quality point standing of 1.0 or better, with the exception of the class of 1930. With this single exception all L.M.H.S. classes showed a quality point standing of 1 plus for four

semesters. Data indicated the fact that L.M.H.S. boys attending the U. of L. four semesters have varying chances of acquiring the quality point standing of their graduating classes. At the two extremes were students of the fourth quartile with 47 chances in 100 of attaining a quality point standing better than their class and students of the first quartile with 89 chances in 100 of showing a standing lower than that of their class. Chances of showing the class standing of between 1.0 and 2.0 were as follows for the different quartiles: fourth, 49 chances in 100; third, 53 in 100; second, 31 in 100; first, 10 in 100. The fact that third quartile students showed 53 in 100 as compared to 49 in 100 for fourth quartile students of reaching the class average may be explained by the fact that the third quartile showed only 18 in 100 as compared with 47 in 100 for the fourth quartile of attaining a standing higher than that of their class.

Students of the upper two quartiles tended to remain in the U. of L. a longer time than did students of the lower quartiles. Data showed that the total percentages of students remaining one year or less and also the percentages remaining two years or less tended to increase with the passing of years. Figures according to quartile ranking indicated what might have been expected. Chances of success as measured by duration of

time spent at the U. of L. are greatest for the fourth quartile, the third, second, and first quartiles following in the order named. Students of the fourth quartile showed a better than even chance of staying four semesters and an even chance of staying eight semesters. On the other hand, students of the first quartile showed only 16 chances in 100 of staying four semesters and 8 chances in 100 of staying eight semesters. Chances of the second quartile were but slightly better than those of the first quartile. Chances of the third quartile were better than twice those of the second, and one-half those of the fourth.

The scores of the Sophomore Comprehensive Tests from 1931 through 1934 $\frac{1}{2}$ compared favorably with the scores of the nation's liberal arts colleges. The U. of L. scores in practically every case were substantially above the national median.

Chapter V

DISTRIBUTION OF GRADES AND COMPARISON OF QUANTILES

Chapter V

DISTRIBUTION OF GRADES AND COMPARISON OF QUARTILES

The traditional measurement of success in school whether it be elementary, secondary, or on the college level, is by scholastic grades. Try as some educators will, the fact remains that the judgment of the instructor, though it may be subjective in nature, is the best criterion we have of the success of the student. The hours of credit, and to a greater degree the quality points, depend upon grades in college. We shall consider the correspondence or non-correspondence of grades received in high school with grades received in college, how the grades are distributed, and the combination of grades and subject fields.

No attempt will be made to find the relation between grades and the instructors who awarded the grades. All grades will be given equal weight notwithstanding the instructor or his peculiarities of grading.

The U. of L. uses the system of grading on the normal distribution curve. The five grades A, B, C, D, and F are used, the letter F representing the failing grade. The variations of the averages as compiled in the tables on quality points might be explained by a scrutiny of the figures in the following tables. The percentages of the numbers are given rather than

the total numbers themselves, for percentages may be used more easily in comparisons. The relation of grades made by L.M.H.S. graduates to the grades made by the entire College may indicate the success of the L.M.H.S. student.

TABLE 19

PERCENTAGES OF L.M.H.S. GRADUATES ACCORDING
TO THE GRADES RECEIVED THE FIRST YEAR AT THE
U. OF L. AND THE SAME PERCENTAGES FOR THE
ENTIRE COLLEGE

Grades	Percentages of Numbers Enrolled in U. of L. Arranged According to Date of Graduation from L.M.H.S. with Percentages for the College									
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL
A	5	11	6	11	13	11	3	9	11	9
B	20	25	16	26	17	26	26	26	14	26
C	45	33	40	36	35	36	38	37	39	37
D	25	18	25	16	17	16	23	17	24	17
F	5	13	12	9	18	9	10	11	12	11
	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$					
	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL	LMHS-ALL					
A	8	10	1	10	15	10	4	10	7	10
B	15	28	19	28	15	27	19	27	20	28
C	38	37	47	37	38	39	43	39	49	41
D	27	15	22	15	23	14	25	14	23	13
F	12	10	11	10	9	10	9	10	1	9

A fairly well balanced distribution seems to exist for the five grades for L.M.H.S. graduates during the five years, although a larger percentage received D's than B's and a larger

percentage failed than received A's. Seven classes from L.M.H.S. received a lower percentage of B's than the entire College received. Eight classes received a higher percentage of C's than the entire College, and the other two classes were but one percentage point lower. Each of the classes received a higher percentage of D's than did the entire College, and the difference was from 6 percentage points in 1931 $\frac{1}{2}$ to 12 percentage points in 1932 $\frac{1}{2}$. Five classes received a higher percentage of F's, and the same number received a lower percentage of F's than the entire College received. It appears that the failures are fairly constant in comparison, but that L.M.H.S. graduates succeed at a lower level than the entire college.

The effect of withdrawals upon the distribution of the grades may be seen by a comparison of the grades of L.M.H.S. graduates with the grades for the entire College during the second year.

TABLE 20

PERCENTAGES OF L.M.H.S. GRADUATES ACCORDING
TO THE GRADES RECEIVED THE SECOND YEAR AT
THE U. OF L., AND THE SAME PERCENTAGES FOR
THE ENTIRE COLLEGE

Percentages Enrolled in U. of L. Arranged by Date of Graduation from L.M.H.S. with Percentages for the College										
Grades	1930		1930 $\frac{1}{2}$		1931		1931 $\frac{1}{2}$		1932	
	LMHS-ALL		LMHS-ALL		LMHS-ALL		LMHS-ALL		LMHS-ALL	
A	1	11	7	9	16	9	9	10	8	10
B	25	26	11	26	27	26	24	28	23	28
C	50	36	44	37	31	37	38	37	39	37
D	17	16	29	17	23	17	23	15	22	15
F	8	9	8	10	2	10	6	10	8	10
	1932 $\frac{1}{2}$		1933		1933 $\frac{1}{2}$		1934		1934 $\frac{1}{2}$	
	LMHS-ALL		LMHS-ALL		LMHS-ALL		LMHS-ALL		LMHS-ALL	
A	7	10	5	10	14	10	6	10	7	11
B	22	27	30	27	17	28	25	28	26	29
C	44	40	37	39	40	41	47	41	41	40
D	21	22	21	14	22	13	18	13	21	12
F	5	7	7	10	7	9	4	9	4	8

The percentages of failures for L.M.H.S. graduates were smaller for the second year than they were for the first year. The percentages of A's were about the same for both years. The entire College had 20% more A's than L.M.H.S. graduates had for the five years. The entire College had 36% more B's than L.M.H.S. graduates had for the five years. L.M.H.S. graduates had 63% more D's than the entire College. The entire College had 33% more F's than the L.M.H.S. graduates. Each of the ten classes had a lower percentage of F's than the entire

College. Each of the ten classes had a higher percentage of D's than the entire College. The more striking features were the small percentages of failures, the increase in percentages of B's, and the decrease in the percentages of D's of the second year in comparison with the first.

We shall consider now the grades translated into quality points according to quartile distribution. In Table 21 the divisions of the quality points were made from a consideration of (1) the grade divisions (2) the number of graduates who received a negative number of quality points (3) the number of semester hours carried normally and (4) the fact that an upper group, a lower group, and two middle groups separate the graduates into groups of comparable numbers. The two upper quartiles of L.M.H.S. graduates, as stated before, receive grade averages from 85% to 100%. These graduates are recommended to college by the principal. The following table can be used for observing the articulation between high school averages and collegiate grades. An examination of the quartiles might indicate the success of the four groups.

TABLE 21

QUARTILE DISTRIBUTION OF QUALITY POINTS
RECEIVED BY L.M.H.S. GRADUATES THE FIRST
SEMESTER AT THE U. OF L.

No. Qual. Pts. at U. of L.	Quar- tile at L.M. H.S. by Schol. Av.	Year of Graduation from L.M.H.S.										Total
		1930 $\frac{1}{2}$ 1930	1931 $\frac{1}{2}$ 1931	1932 $\frac{1}{2}$ 1932	1933 $\frac{1}{2}$ 1933	1934 $\frac{1}{2}$ 1934						
Less than 1	4th									1		1
	3rd									2		2
	2nd	1	5	1	3	6	4	1	6	10	1	38
	1st	2	7	6	6	12	6	9	2	9	2	61
1-15	4th									1		1
	3rd	1			1	2	2	1	2	3	7	19
	2nd		9	5	6	22	11	12	6	20	10	101
	1st	8	8	7	2	7	5	5	3	2	1	48
15-30	4th			3	3	3	1	3	4	4	2	23
	3rd		1	1	5	6	1		3	10	4	31
	2nd	5	5	4	4	3	4	9		7	2	43
	1st	2	2	2	1			2	1			10
30 and More	4th		2	3	2	6	1	2	3	1	5	25
	3rd	2	1	1	1	3	3	1	1	1		14
	2nd	1										1
	1st	1						1				2

In ten graduating classes one boy of the highest quartile in L.M.H.S. dropped to the failing group at the U. of L. Two boys of the third quartile dropped as low as the failing group at the U. of L. Fifty boys ranked in the highest quartile at L.M.H.S., of whom 48 were divided almost equally between the C group and B or better group at the U. of L. Two boys of the third quartile at L.M.H.S. dropped as low as the failing group

at the U. of L. Fourteen of the third quartile were ranked in the B or better group at the U. of L. The majority of the third quartile were divided between the D group and the C group at the U. of L., more being classified in the C group than in the D group. One boy who ranked in the second quartile at L.M.H.S. achieved the B or better group at U. of L., one hundred one maintained the same group number, and of those, in the second quartile more increased their group number standing than lowered it at the U. of L. One hundred twenty-one graduates ranked in the lowest quartile at L.M.H.S., sixty-one of whom ranked in the failing group at the U. of L., and sixty improved their standing, ten to the C group and two to the B or better group.

Invariably more students remained in the like numbered group in the U. of L. in which they were ranked at L.M.H.S., then changed their grouping, but the difference is small enough to raise the question whether the degree of correspondence is sufficient to have meaning. The predictive value of this table is in consequence rather low.

We may discover more about the success of the various groups of L.M.H.S. graduates if we consider the number of quality points earned during four semesters at the U. of L. The study of a table of distribution by quartiles of the graduates may indicate the reliability of data which has been

given previously. In Table 22 the compilation of quality points was based on (1) the number of hours carried by the average graduate and (2) the number of quality points awarded for the various grades.

TABLE 22

QUARTILE DISTRIBUTION OF QUALITY POINTS
RECEIVED BY L.M.H.S. GRADUATES THE FIRST
FOUR SEMESTERS AT THE U. OF L.

Tot. No. Qual. Pts. at U.of L. dur- ing 4 semes- ters	Quar- tile at L.M. H.S.	Date of Graduation from L.M.H.S.										Total
		1930 $\frac{1}{2}$ 1930	1930 $\frac{1}{2}$ 1931	1931 $\frac{1}{2}$ 1932	1932 $\frac{1}{2}$ 1933	1933 $\frac{1}{2}$ 1934	1934 $\frac{1}{2}$ 1935					
Less than 1	4th											
	3rd											
	2nd		1		1							2
	1st	1		1	2	2	2			1		11
1-60	4th									1		1
	3rd	1			1	3	1	2	3	2		13
	2nd	3	6	4	2	8	4	7	3	14	2	53
	1st	4	7	5	4	4	2	2	2	1		31
60-120	4th	1	1	2	3	2	1	5	1	3	3	22
	3rd	1		2	5	9	2		2	10	3	34
	2nd	2	4	3	3	1	3	6		1		23
	1st	3	1	1								5
120 & More	4th		1	4	1	6	1		3	1	3	20
	3rd		1			1	2	1				5
	2nd	1	1									2
	1st											
Total		17	23	22	20	35	20	24	13	34	14	222

During the five year period, 1930 through 1934 $\frac{1}{2}$, no L.M.H.S. graduate in the third or fourth quartile dropped as low as the failing group at the U. of L. Thirteen of 222

students, or 6%, were in the failing group. Ninety-eight of 222, or 44%, gained from 1 to 60 quality points. Eighty-four of 222, or 38%, gained from 60 to 120 quality points. Twenty-seven of 222, or 12%, gained more than 120 quality points. One graduate of the fourth quartile earned less than 60 quality points. The forty-three graduates in the fourth quartile were almost evenly divided between the two highest groups. The chances are 98 in 100 that a graduate in the fourth quartile will gain 60 or more quality points during the first four semesters at the U. of L. Fifty-two graduates were in the third quartile, and 34, or 65%, of these gained from 60 to 120 quality points. The chances are 75 in 100 that a graduate in the third quartile will gain 60 or more quality points in four semesters. Eighty graduates were in the second quartile, and the chances are 69 in 100 of a graduate in the second quartile gaining less than 60 quality points. Forty-seven graduates were in the first quartile, and the chances are 89 in 100 of a graduate in the first quartile gaining less than 60 quality points. A graduate in the first quartile has no chance of gaining more than 120 quality points.

A comparison of the tables of quality points for one semester and for four semesters, Table 21 and Table 22, indicates that the numbers in the higher two quartiles were

more constant than the numbers in the lower two quartiles.

A better comparison of the tenure of certain groups might be made by quartiles arranged according to grades received in L.M.H.S. Fifty of the highest quartile in L.M.H.S. remained one semester, 42 of whom stayed four semesters. Fifty-one of 66 boys in the second highest quartile were in attendance at the end of four semesters. Seventy-nine of 190 boys in the second quartile received quality points for four semesters. Forty-seven of 116 students who were in the lowest quartile stayed four semesters.

Tables 21 and 22 create an impression that there is some relationship between grades received in L.M.H.S. and those received in the U. of L. Correlation coefficients might help to check this impression. According to explanations of coefficients of correlation there should be a certain number of cases before the degree of relationship can be ascertained. A small number of cases would indicate only that relationship is present without showing the degree. The tables which follow should indicate in either case the validity of the aforementioned impression.

TABLE 23

CORRELATION BETWEEN GRADES RECEIVED IN
L.M.H.S. AND GRADES RECEIVED THE FIRST
SEMESTER AT THE U. OF L.

Year of Graduation from L.M.H.S.										
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Coeffi- cient of corre- lation (r)	.526	.564	.736	.741	.753	.709	.561	.803	.564	.639
P.E. (r)	.102	.077	.061	.102	.050	.056	.073	.050	.058	.072
No. of Cases	23	41	33	31	70	38	45	31	71	34

The data from Table 23 indicate that there is a definite relationship between the grades (shown by quality points) for the first semester at the U. of L. and the averages of the grades received in the junior and senior years in L.M.H.S. The classes of 1932 and 1934 had a sufficient number of cases to confirm this statement. The probable errors of the coefficients of correlation are small enough to conform to what has been said. The correlation for the entire group is .660 with a probable error of .070. There seems to be predictive value in the grades in L.M.H.S. for success in the U. of L. The data of Table 23 is strengthened by the data of Table 13.

The number of L.M.H.S. graduates in attendance for four

semesters is less than the number of graduates in attendance for one semester, but the number is sufficient to show whether any relationship is present.

TABLE 24

CORRELATION BETWEEN GRADES RECEIVED IN
L.M.H.S. AND GRADES RECEIVED FOR FOUR
SEMESTERS AT THE U. OF L.

Year of Graduation from L.M.H.S.										
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Coeffi- cient of corre- lation (r)	.463	.584	.666	.795	.669	.682	.720	.367	.664	.428
P.E. (r)	.139	.096	.089	.059	.066	.078	.072	.180	.060	.151
No. of Cases	17	23	22	22	34	20	24	12	34	14

The data of Table 24 indicate that a positive relationship exists between grades in L.M.H.S. and grades, shown by quality points, received for four semesters at the U. of L. The coefficient of correlation should be at least four times the probable error of the coefficient of correlation to show that some relationship is present. Seven classes conform to this standard, a fact which is sufficient to substantiate the

statement that there is relationship between the two criteria. Table 24 has some predictive value though less than that of Table 23.

Summary. A comparison of grades for L.M.H.S. graduates with grades for the entire College for the first year indicated a skew toward the lower grades. A correction of this was made the second year, particularly in regard to the F's, where the skew was in the opposite direction. The percentages of C's were higher for both years for L.M.H.S. graduates than for the entire College, and the same was true for D's. The percentages of A's and B's was lower for L.M.H.S. graduates than for the entire College.

A consideration of the grades, shown by quality points, received by L.M.H.S. graduates, grouped into quartiles, indicated that the highest group received the highest grades; the second highest group, the second highest grades; etc. The grades received for four semesters confirm this belief. The data indicate that a student who receives a low average at L.M.H.S. will receive a low average at the U. of L. We may say this with more assurance than we may say that a student with a high average at L.M.H.S. will receive a high average at the U. of L.

L.M.H.S. graduates who were ranked in the highest quartile were inclined to rank in a lower group at the U. of L. This was true of the graduates in the third quartile after they had been in the U. of L. for two years. The graduates who

were ranked in the lowest quartile at the L.M.H.S. tended to be in either the D group or the failing group. This was true at the end of one semester and was still true at the end of two years. The correlation was fair, but the predictive value of the tables was not very high. The data of Table 13 seems to substantiate this statement.

Chapter VI

COMPARISON OF ITEMS FROM L.M.H.S.
RECORDS WITH CRITERIA FROM THE
U. OF L. RECORDS

Chapter VI

COMPARISON OF ITEMS FROM L.M.H.S. RECORDS WITH CRITERIA FROM THE U. OF L. RECORDS

The comparisons of the scholastic averages of the members of ten classes graduated from L.M.H.S. who have entered the U. of L. have shown certain characteristics which now shall be combined. The best method of expressing relationship is by means of coefficients of correlation, but in some situations the number of cases is too small to use that method. The consideration of the distribution of two criteria may be sufficient for the purposes of this study. In some of the tables the total group is used, for the possibility of greater significance which should not be minimized. In order that results worthy of comment may be reached, the relationship between parts of the data which apply to the greatest number in both L.M.H.S. and the U. of L. has been computed.

Since we are making a statistical study of graduates from the L.M.H.S., the records for age, rank in graduating class, average grade for junior and senior work, occupation of parent, and number of credits received in various subject fields of the high school curriculum constitute the first of the two criteria. The selection of a criterion in the college with which to compare the high school records was difficult

to make. Placement tests were eliminated because a sufficient number of graduates did not take them. The same situation was true for the sophomore tests. The number of semesters in attendance was given for each graduate, but the last three classes have not had the opportunity of completing eight semesters. The number of hours earned the first semester was seriously considered as the best criterion, but there were objections since the number of hours earned (1) gives no credit for grades higher than D, (2) compares only passing and failing without qualifying passing, and (3) takes no account of differences in student loads due to such factors as employment and limitation by faculty.

The one factor in the collegiate setup which has none of the objectionable features of the records just mentioned is the number of quality points earned the first semester. Every student who enrolls in the U. of L. is credited with the number of quality points gained. For those who withdraw before the completion of the first semester, or for those who fail the larger part of their courses, a zero number or a negative number of quality points is recorded. Therefore, the number of quality points earned the first semester constitutes the second of the two criteria.

The quality points have been classified into four groups.

The highest group corresponds to grades of B and above, the second group corresponds to a grade of C, the third group to a grade of D, and the lowest group to a grade of F or a failing grade. These groups may be considered as quartiles to correspond by number with the high school quartile division.

The question of the effect of age upon the success of students in college has been mentioned in Chapter II, and the relationship of age to success in college will be considered now. Tables were constructed for each of the ten classes from 1930 to 1934 $\frac{1}{2}$, but the paucity of data invalidated any conclusions which might have been drawn. Four hundred twenty-one graduates had records of their ages. Percentages were computed to the nearest unit. The following table is for the purpose of determining whether there is any predictive value in the age of graduates at the date of graduation, with respect to probable success in the U. of L. (See Table 25 on page 78)

Seventy-one per cent of L.M.H.S. graduates who attended the U. of L. were between the ages of 16 and 19 at the date of their graduation. Nineteen per cent were unusually old or unusually young at the date of graduation.

One boy, of a total of 74 boys, over 18 years of age attained the highest group at the U. of L. at the end of the first semester, and he was in the highest quartile at L.M.H.S.

TABLE 25

PERCENTAGES AND NUMBERS OF L.M.H.S. GRADUATES
SEPARATED ACCORDING TO AGES AT DATE OF GRADUA-
TION AND CLASSIFIED BY THE NUMBER OF QUALITY
POINTS RECEIVED THE FIRST SEMESTER AT THE
U. OF L.

Age in Years at Date of Grada- tion from L.M.H.S.	Quar- tile at L.M. H.S.	Number of Quality Points Earned the First Semester at the U. of L.									
		30 and Over		15 - 30		1 - 15		Less than 1		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
16 and Under	4th	7		3				1			
	3rd	4		4		4					
	2nd			6		13		4			
	1st	1		2		2		3			
	Tot.	12	3	15	3	19	5	8	2	54	13
17	4th	13		13		1					
	3rd	7		15		7		1			
	2nd			18		51		18			
	1st			2		17		9			
	Tot.	20	5	48	10	76	18	28	8	172	41
18	4th	5		2							
	3rd	2		6		6		1			
	2nd	1		17		22		11			
	1st	1		4		15		28			
	Tot.	9	2	29	6	43	10	40	10	121	30
19	4th	1		3							
	3rd			2		1					
	2nd			3		12		5			
	1st					8		14			
	Tot.	1		8	2	21	5	19	4	49	11
20 and Over	4th			2							
	3rd			2		2					
	2nd			2		1		1			
	1st			2		6		7			
	Tot.			8	2	9	2	8	2	25	6
Total		42	10	108	26	168	40	103	24	421	100

Twelve boys who were under 17 years of age gained 30 or more quality points, and 11 of these were in the two highest quartiles. Twenty boys who were 17 years old gained 30 quality points or more, and 20 were in the two highest quartiles. A suggestion might be ventured that the boys of superior grades in L.M.H.S. under the age of 18 gain 30 or more quality points. The data for boys who gain from 15 to 30 quality points refute this to some extent, because the age does not seem to affect this group, nor does the quartile ranking. This fact seems to be substantiated by the group of D grade, in which the cases appear to be distributed throughout the age classifications. A similar situation exists in the F classification.

The same number of boys 16 years old or younger rated C or above as rated D or below. Eleven per cent more boys 17 years old earned D or lower than C or higher. No boy 20 years of age or older averaged above C the first semester, and only one boy who was 19 years old averaged above C. Sixty-seven per cent of the boys 18 years old averaged below C. The most positive statement which can be made is that boys over 18 years of age at date of graduation probably will average below B.

Table 25 was arranged for quartile rank by high school average and classified by quality point standing in the U. of

L., with the consideration of the ages of graduates. A table of the two grade classifications, quality points and quartiles, will be given to clarify the statistics tabulated in Table 25 and to be compiled in other tables. The analysis of Table 21 was to some extent based on the following table, which is a condensation of Table 21 with the percentages given. Theoretically, a boy in the highest quartile in the L.M.H.S. should be in the highest group at the U. of L., a boy in the second highest quartile in L.M.H.S. should be in the second highest group at the U. of L., etc. Such a condition would be true where there is perfect correspondence. Differences in systems of grading, (the U. of L. grades on curve, L.M.H.S. does not), orientation or lack of it, personality clashes between instructor and student, are all factors in preventing complete correspondence.

TABLE 26
PERCENTAGES AND NUMBERS OF L.M.H.S. GRADUATES
SEPARATED ACCORDING TO QUARTILES AND CLASSIFIED
BY THE NUMBER OF QUALITY POINTS RECEIVED THE
FIRST SEMESTER AT THE U. OF L.

Quartile at L.M.H.S.	Number of Quality Points Earned the First Semester at the U. of L.									
	30 and Over		15 - 30		1 - 15		Less than 1		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
4th	26	6	23	5	1		1		51	12
3rd	13	3	30	7	22	5	2		67	16
2nd	1		45	11	98	23	39	9	183	43
1st	2		10	2	47	11	61	14	120	29
Total	42	10	108	25	168	41	103	24	421	100

Fifty-one students, 12%, were in the fourth quartile at L.M.H.S., and 6 per cent of these were in the B or better group at the U. of L. Five per cent decreased their standing to the C group, one boy lowered his standing to the D group, and one boy dropped to the lowest group, which is equivalent to failure at L.M.H.S.

Sixty-seven students, 16%, were in the third quartile at L.M.H.S. and 7 per cent or less than half of these were in the C group at the U. of L. Five per cent dropped to the D group, and 3 per cent rose one group number. Two boys fell as low as the first group.

One hundred eighty-three students, 43%, were ranked in the second quartile at L.M.H.S., and 23 per cent of these were in the D group at the U. of L. Eleven per cent rose by one group number, and 9 per cent lowered their standing one group number. One boy rose to the highest group.

One hundred twenty students, 29%, were ranked in the lowest quartile at L.M.H.S. and 14 per cent of these remained in the failing group at the U. of L. Eleven per cent rose one group number and 2 per cent rose two numbers. Two boys who ranked in the lowest quartile at L.M.H.S. increased their standing to the highest group at the U. of L.

If we consider the data from the U. of L. point of view

we notice that 10% of the entire number were in the highest college group, and that practically all of this 10% (9% of the entire number) had a high school average of 85% or better. Twenty-five per cent gained between 15 and 30 quality points, of which number practically as many averaged above 85% as averaged below it. Forty-one per cent were in the D classification, of which number 34 per cent had an average below 85%. Twenty-four per cent had a failing average at the U. of L. All of these had also a high school average below 85%.

Consideration of the relationship between quality points earned the first semester and certain phases of the high school records will be continued. The number of credits earned in mathematics in L.M.H.S. was selected for comparison because the records were complete, four credits being required for graduation during the period covered by the study. Since four credits were required, we should expect to find an unusual number of students of all quartiles who did not pursue their studies in mathematics beyond the required courses. Three of the cases had only two credits in mathematics, and because they were in different ones of the four classifications shown in the following table and could not affect the totals, all three were disregarded.

TABLE 27

PERCENTAGES AND NUMBERS OF L.M.H.S. GRADUATES
SEPARATED ACCORDING TO NUMBER OF L.M.H.S.
CREDITS IN MATHEMATICS AND CLASSIFIED BY THE
NUMBER OF QUALITY POINTS RECEIVED THE FIRST
SEMESTER AT THE U. OF L.

No.	Credits in Math. Earned at L.M.H.S.	Quar- tile at L.M.H.S.	Number of Quality Points Earned the First Semester at the U. of L.									
			30 and Over		15 - 30		1 - 15		Less than 1		Total	
			No.	%	No.	%	No.	%	No.	%	No.	%
8		4th	14		9							
		3rd	2		5		1					
		2nd	1		13		19		4			
		1st			2		12		7			
		Tot.	17	4	29	7	32	8	11	3	89	22
7		4th	7		8				1			
		3rd	7		9		4					
		2nd			13		20		4			
		1st	1		4		10		5			
		Tot.	15	4	34	8	34	8	10	2	93	22
6		4th	1		2							
		3rd	3		6		2		1			
		2nd			6		19		8			
		1st			2		7		13			
		Tot.	4	1	16	4	28	7	22	5	70	17
5		4th	1		2							
		3rd	1		3		7					
		2nd			4		9		9			
		1st	1		1		7		11			
		Tot.	3	1	10	2	23	6	20	5	56	14
4		4th	3		2		1					
		3rd			7		8		1			
		2nd			8		29		13			
		1st			1		12		25			
		Tot.	3	1	18	4	50	12	39	9	110	25
Total			42	10	107	25	167	41	102	24	418	100

Forty-four per cent of L.M.H.S. graduates who entered the U. of L. during the period 1930-1934 $\frac{1}{2}$ had more than six credits in mathematics. Seventy-five per cent of the graduates took more than the amount required for graduation.

The graduates who had eight credits in mathematics were distributed over the four quality point groups, with the greatest number in the two middle groups. Thirty of thirty-one boys who averaged 85% or better had grades of C or better. The majority of those with an average of less than 85% in L.M.H.S. had an average of less than C in the University. One boy who averaged less than 85% had an average of B or better in the U. of L.

The distribution of the graduates who had seven credits in mathematics is similar to that of the graduates who had eight credits in mathematics. The boys with higher averages in L.M.H.S. seem to gain higher averages in college regardless of the number of credits in mathematics.

Seven boys who had five credits in mathematics had averages of 85% or better and dropped to D standing in college. Four boys who had seven credits in mathematics with a similar classification in L.M.H.S. did the same in the U. of L. No deductions can be made from that comparison.

It would appear from the scattered distribution and

the normal expectancy from boys of the various types that the effect of mathematics upon the success of graduates is small, if there is any. The low average graduate apparently will remain a low average college student whether he has had seven credits or five credits in mathematics. The high average student usually obtained a good average in college whether he had more than the required number of credits in mathematics or not. The high average graduate usually took more than the required number of credits in mathematics.

At this point, while we are discussing the distribution of graduates according to quality points in the U. of L. with the number of credits earned in mathematics, the various quartiles, etc. we might consider the tenure of the lowest one-third in each graduating class. It will be necessary to recall the fact that the classes of 1933 $\frac{1}{2}$, 1934, and 1934 $\frac{1}{2}$ did not have an opportunity to attend the U. of L. more than seven, six, and five semesters respectively, since the data were taken in the summer of 1937. We shall average the total number of semesters for each class so that a comparison may be made. Since the cases are few in number a particular class may have a high average, but for the ten classes the averages should show a fairly accurate picture of the tendencies for the lowest one third in rank of the graduating classes who entered the U. of L.

TABLE 28

AVERAGES OF NUMBERS OF SEMESTERS IN
ATTENDANCE AT THE U. OF L. OF THE
LOWEST ONE-THIRD OF EACH OF TEN CLASSES
GRADUATED FROM L.M.H.S.

No.in Gradua- ting Class	Year of Graduation from L.M.H.S.									
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
	123	114	140	105	203	136	197	122	240	133
No. Enter- ing U.of L.	33	42	34	35	70	38	46	31	71	36
No.in Lowest one- third Entering U.of L.	9	12	12	5	17	12	19	6	16	6
Av.No. of Sem. for Lowest one- third	4.1	3.5	3.5	6.0	2.4	3.3	2.5	3.2	1.8	2.3
Av.No. of Sem. for Entire Class	4.7	4.3	4.9	3.6	4.3	3.7	3.4	3.4	3.4	3.1

The classes of 1930, 1930 $\frac{1}{2}$, 1931 $\frac{1}{2}$, 1933, 1933 $\frac{1}{2}$ and 1934 $\frac{1}{2}$ had averages for the lowest one third below the averages for the entire class in semesters in attendance, but not significantly so. The class of 1931 $\frac{1}{2}$ was exceptional in the respect

that the five boys who were in the lowest one third of their graduating class at L.M.H.S. averaged 6.0 semesters in attendance at the U. of L., while the entire class averaged only 3.6 semesters in attendance. This was the only reversal of form, for the classes of 1931, 1932 and 1934 averaged higher decisively than the lowest one third of the classes averaged.

Much has been written and more has been spoken about the effect of heredity upon intelligence. Perhaps the choice of quality points is not the best criterion of intelligence, but we believe it to be sufficient for the following comparison, namely, occupation of parent with the number of quality points earned the first semester at the U. of L. The classification of the occupations for the most part was not difficult because the categories were sufficiently broad to include all cases. Whether to classify a horse trader as a professional man or as a merchant was puzzling for a time, until a compromise of salesman was made.

The seven categories finally decided on were distinct from one another; yet each contained a fairly well-balanced number of cases. Twenty-nine parents were housekeepers, and since housekeeping was not susceptible of being bracketed with any of the other occupations, the number was deemed sufficient to justify a separate class. Before giving the comparison, we shall give a table of the categories.

TABLE 29

NUMBERS OF PARENTS AND PERCENTAGES OF THE
OCCUPATIONS OF PARENTS OF L.M.H.S.
GRADUATES ATTENDING THE U. OF L., AND
THE VARIOUS CLASSIFICATIONS OF EACH

Categories of the Occupations of Parents of L.M.H.S. Graduates	No.	%	Particular Occupations Grouped Under the Categories
Executive	53	13	Administrator, Director of Bank or Corporation, Manager of a Large Business, Owner of an Industrial or Commercial Business
Professional Person	60	15	Physician, Dentist, Chiropractor, Minister, Lawyer, Teacher, Musician, Engineer (Civil, Chemical, etc.), Architect
Merchant	74	18	Hatter, Furrier, Junk Business, Meat Shop, Druggist, Electric Shop, Contractor, Tailor
Salesman	68	14	Auctioneer, Cake Saleswoman, Bond Salesman, Saleslady, Real Estate Salesman, Insurance, Horse Trader
Clerk	50	12	Agent (Passenger, Income Tax, Government), Mail Clerk, Book- keeper, Draftsman, Auditor, Librarian
Housekeeper	29	7	
Skilled	59	14	Plumber, Carpenter, Foreman, Mason, Engineer (of Train), Mechanic, Motorman, Policeman, Butcher
Laborer			
Unskilled	25	6	Milkman, Mail Truck Driver, Farmer, Conductor

The number of parents who are laborers is larger than the number in any other classification of occupations but not as large as one would expect. The occupations of the parents of four hundred eighteen graduates were listed. Of the total number, 20% are laborers, 18% are merchants, 15% are professional people, 13% are executives, 14% are salesmen, and 12% are clerks. A total of 46% belong to the class which might be termed leaders, since they are merchants, executives, or professional people. In all of these cases the male parent is living and probably is the parent with whom the graduate resides, since under Occupation of Parent on the form for taking the original data, his is the name listed.

An attempt was made to correlate occupation with quality points gained by the method of the Coefficient of Mean Square Contingency, but insufficient data prevented the use of this method for either the individual classes or for the entire group. Perhaps instead of saying that the data were insufficient it would be more exact to say the data were not sufficiently well distributed. We used, therefore, the same method as we used in Tables 25, 26, and 27, namely, percentages of distribution. The data in Table 30 should be of some value in the argument of capital versus labor as regards the opportunity and the use of educational advantages as measured by quality points gained the first semester. We might combine

the categories into executives, professional people, and merchants, as distinguished from salesmen, clerks, and laborers, or in other words higher salaried people and lower salaried people. The classification of housekeepers is to be disregarded since it is impossible to classify housekeepers according to income. The percentages have been computed to the nearest unit, a fact which accounts for discrepancies in total percentages. (See Table 30, page 91)

The first comparison will be the ratio of the graduates whose high school average was 85% and above to those whose average was below 85%, for each of the categories. The ratio for Executives is 18 to 35, for Salesmen 18 to 51, for Clerks 15 to 35, for Housekeepers 10 to 19, for Skilled Laborers 8 to 51, and for Unskilled Laborers 3 to 22. The ratio for higher salaried people is 64 to 123, and for lower salaried people is 44 to 159.

The next comparison will be the measurement of the success of the graduates by quality points. The division is made between those who have an average of C or better with those who have an average of less than C. This division is not accurate because some graduates took a lighter schedule, and the number of quality points indicating their success would be less than the number indicating success on the table. The ratio for Executives was 33 to 20, for Professional

TABLE 30
 NUMBERS AND PERCENTAGES OF L.M.H.S. GRADUATES SEPARATED
 ACCORDING TO OCCUPATIONS OF PARENTS AND CLASSIFIED BY
 THE NUMBER OF QUALITY POINTS EARNED THE FIRST SEMESTER
 AT THE U. OF L.

Occupations of Parents of L.M.H.S. Graduates	Quar- tile at L.M. H.S.	Number of Quality Points Earned the First Semester at U. of L.								Total	
		30 and Over		15 - 30		1 - 15		Less than 1			
		No.	%	No.	%	No.	%	No.	%	No.	%
Executive	4	4		3							
	3	1		7		3					
	2	1		13		11		3			
	1			4		1		2			
	Tot.	6	1	27	6	15	4	5	1	53	13
Professional Person	4	9		6							
	3	2		3		8					
	2			3		9		10			
	1					6		4			
	Tot.	11	3	12	3	23	6	14	3	60	14
Merchant	4	4		2							
	3	2		8		2					
	2			7		21		8			
	1	1				12		7			
	Tot.	7	2	17	4	35	9	15	3	74	18
Salesman	4	1		6		1					
	3	1		5		3		1			
	2			8		21		7			
	1	1		4		3		7			
	Tot.	3	1	23	6	28	7	14	3	68	15
Clerk	4	4		2							
	3	2		3		4					
	2			4		16		3			
	1					7		5			
	Tot.	6	1	9	2	27	6	8	2	50	12
Housekeeper	4	1		3				1			
	3	2		1		1		1			
	2			4		9					
	1					6					
	Tot.	3	1	8	2	16	4	2		29	7
Laborer Skilled	4	3		1							
	3	1		2		1					
	2			2		5		5			
	1			1		7		31			
	Tot.	4	1	6	1	13	3	36	9	59	14
Laborer Unskilled	4										
	3	2		1							
	2			3		4		2			
	1			1		5		7			
	Tot.	2		5	1	9	2	9	2	25	6
TOTAL		42	10	107	25	166	41	103	24	418	100

Persons 23 to 37, for Merchants 24 to 50, for Salesmen 26 to 42, for Clerks 15 to 35, For Housekeepers 11 to 18, for Skilled Laborers 10 to 49, and for Unskilled Laborers 7 to 18. The ratio for higher salaried people is 80 to 107, and for lower salaried people 58 to 144.

The third comparison will deal with the numbers of graduates who are out of position for each of the classes of occupations; that is, we shall find the graduates whose high school average was 85% or above and who averaged lower than C in the U. of L., and conversely. The ratio of those who averaged 85% or above and lower than C to those who averaged below 85% and C or above for Executives is 3 to 18, for Professional Persons 8 to 3, for Merchants 2 to 8, for Salesmen 5 to 13, for Clerks 4 to 4, for Housekeepers 3 to 4, for Skilled Laborers 1 to 3, and for Unskilled Laborers 0 to 4. The comparison for higher salaried people is 13 to 29; and for lower salaried people, 10 to 24.

The last comparison will consider the numbers of graduates who are in position for each of the categories. In position means graduates whose high school average is 85% or above and whose college average is C or above and the opposite. The ratio for Executives is 15 to 17, for Professional Persons 20 to 29, for Merchants 16 to 48, for Salesmen 13 to 38, for

Clerks 11 to 31, for Housekeepers 7 to 15, for Skilled Laborers 7 to 48, and for Unskilled Laborers 3 to 18. The comparison for higher salaried people is 51 to 94, and for lower salaried people the ratio is 34 to 135.

The scholastic success, if 85% indicates success, of the L.M.H.S. graduates who attended U. of L. is greatest for sons of Professional Persons, then for sons of Housekeepers, Executives, Clerks, Salesmen, Merchants, Skilled Laborers, and Unskilled Laborers, in order. The collegiate success, if C indicates success, of L.M.H.S. graduates who attended the U. of L. is greatest for sons of Executives, then for sons of Professional Persons, Salesmen, Housekeepers, Merchants, Clerks, Unskilled Laborers, and Skilled Laborers in order. A total of 82 graduates were out of position, and 336 were in position. The predictive value of occupation of parent to success in college is fair.

A comparison of the intelligence of L.M.H.S. graduates who entered the U. of L. measured in each institution, was thought to be of value. Unfortunately, the number of graduates who had I.Q. scores and scores on the Psychological Test were too scattered for individual classes. Five classes had less than 20 cases, three classes had between 20 and 30 cases, and two classes had over 30 cases. The correlation between I.Q. scores and scores on the Psychological Test was .661.

with a probable error of .023. Another reason for not using I.Q. scores was the fact that some tests were given in junior high school and some in senior high school, and thus measured graduates at different ages.

As the next best single item, it was thought that the average of the high school grades could be correlated to the greatest advantage with the Psychological Test as a criterion. The Psychological Test was used because a greater number of graduates had scores on this test than on any other placement test, and also because it was thought that such a test measured intelligence more accurately than any of the other tests.

TABLE 31

CORRELATION OF SCORES ON THE PSYCHOLOGICAL
PLACEMENT TEST AT THE U. OF L. WITH THE
AVERAGES OF L.M.H.S. SCHOLASTIC GRADES

	Year of Graduation from L.M.H.S.									
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Corre- lation of L.M. H.S.Av. with scores on Psych. test (r)	.254	.370	.555	.517	.619	.593	.487	.529	.521	.546
P.E. (r)	.161	.093	.122	.086	.050	.074	.085	.108	.059	.084
No. of Cases	16	38	29	33	69	35	40	29	67	32

The data indicate the fact that there is a definite relationship between the L.M.H.S. averages and scores made by the graduates on the Psychological Placement Test. The coefficient of correlation should be at least four times the probable error to indicate some relationship, which fact would invalidate the results for 1930 where r equals .254 and the P.E._(r) equals .161. In 1930 $\frac{1}{2}$ there is only a slight indication of relationship. Usually the r should be five or six times the P.E._(r) to show a decided correlation, and this condition is satisfied in 1931 $\frac{1}{2}$, 1932, 1932 $\frac{1}{2}$, 1933, 1933 $\frac{1}{2}$, 1934, and 1934 $\frac{1}{2}$. The classes of 1932 and 1934, which were the largest, show a high correlation, in which the P.E._(r) is the lowest of the ten classes.

Whether the requirement of four years of English in the L.M.H.S. is of value to the graduate might be seen to some degree by the correspondence or non-correspondence of English grades in the high school with the grades received the first year in college. Since we believe that a certain amount of "grade getting" accrues to the individual because of orientation or familiarity with school procedures, we took the four year average in English in L.M.H.S. rather than the junior-senior average only. The grades in the U. of L. are awarded by means of the letters A,B,C,D,E, and F, and those in L.M.H.S. by numbers from 70 to 100. We averaged the letters letting an A and a B be represented by B plus, a B and

C by C plus, etc. The Pearson Product-Moment formula for computing the coefficient of correlation was used.

TABLE 32

CORRELATION OF GRADES IN ENGLISH IN L.M.H.S.
FOR FOUR YEARS WITH THE GRADES IN ENGLISH
AT THE U. OF L. FOR THE FIRST YEAR

	Year of Graduation from L.M.H.S.									
	1930	1930 $\frac{1}{2}$	1931	1931 $\frac{1}{2}$	1932	1932 $\frac{1}{2}$	1933	1933 $\frac{1}{2}$	1934	1934 $\frac{1}{2}$
Corre- lation of Eng. Grades in L.M. H.S. with Eng. Grades in U.of L.										
	.412	.547	.724	.592	.569	.732	.524	.656	.673	.732
P. E. (r)	.125	.079	.057	.078	.061	.054	.077	.077	.048	.058
No. of Cases	20	36	31	32	55	54	40	25	58	29

We surmise from Table 32 that a relationship between the grades received in English at L.M.H.S. and grades received in English at the U. of L. exists. Where the number of cases is unusually small, as in the classes of 1930, 1933 $\frac{1}{2}$, and 1934 $\frac{1}{2}$ we may say that a relationship is present, without saying that the correlation is definite. But in the classes of 1930 $\frac{1}{2}$, 1931,

1931 $\frac{1}{2}$, 1932 $\frac{1}{2}$, and 1933 quite a respectable correlation is found. The number of cases is sufficient for the validity of the formula, and the P.E. (r) is small enough to allow the indication of a conclusion; and in the two largest classes, 1932 and 1934, a definite relation exists between English grades in the two institutions.

The best items from the high school and college records for predictive purposes appear to be high school grades and quality point standings. Table 33 shows quartile groupings for each criterion. For complete articulation a student in the fourth quartile in L.M.H.S. should be in the fourth quartile in the U. of L., a student in the third quartile at L.M.H.S. should be in the third quartile at the U. of L., etc.

TABLE 33

QUARTILE DISTRIBUTION IN L.M.H.S.
AND IN THE U. OF L.

Quartile at L.M.H.S.	Quartile at the U. of L.			
	Fourth	Third	Second	First
Fourth	26	20	3	2
Third	14	13	27	12
Second	2	19	58	105
First	2	3	17	98

The data of Table 33 indicate the fact that the majority of students have success commensurate with their high school

records. More students in the second quartile at L.M.H.S. rank in the first quartile at the U. of L. than either stay in the same quartile or advance to a higher one. First quartile students appear to remain in the first quartile at the U. of L. Students in the fourth quartile may drop to the third quartile but seldom drop below the third quartile. Third quartile students may be in any quartile at the U. of L. although more are in the second quartile than in any other quartile.

The data of Table 33 become more meaningful if we compute the chances of a L.M.H.S. student to rank in the various quartiles at the U. of L.

TABLE 34

NUMBER OF CHANCES IN 100 OF QUARTILE DISTRIBUTION IN L.M.H.S. BEING RETAINED IN THE U. OF L.

Quartile at L.M.H.S.	quartile at the U. of L.			
	Fourth	Third	Second	First
Fourth	51	39	6	4
Third	21	20	41	18
Second	1	10	32	57
First	2	2	14	82

The chances are 51 in 100 for a student in the fourth quartile at L.M.H.S. to be in the fourth quartile at the U. of L. The chances are 90 in 100 of a student in the fourth

quartile at L.M.H.S. being above the second quartile at the U. of L. A student in the third quartile has 21 chances in 100 of being in the fourth quartile or less than one half the chances of a fourth quartile student. A third quartile student has more chances of dropping to a lower quartile than he has of being in either the third or fourth quartiles. A student in the third quartile has four times as many chances of being in the first quartile and seven times as many chances of being in the second quartile as a student in the fourth quartile has. A student in the second quartile has one chance in 100 of being in the fourth quartile and 11 in 100 of being in either the third or fourth quartile at the U. of L. A second quartile student has 32 chances in 100 of maintaining his quartile standing and 57 in 100 of dropping to the first quartile. A first quartile student at L.M.H.S. has 82 chances in 100 of being in the first quartile at the U. of L. He has 4 chances in 100 of being in either of the two highest quartiles, and 18 in 100 of improving his standing.

A student in either of the two highest quartiles at L.M.H.S. has 65 chances in 100 of being in either of the two highest quartiles at the U. of L. A student in either of the two lowest quartiles at L.M.H.S. has 92 chances in 100 of being in either of the two lowest quartiles at the U. of L. A student has 46 chances in 100 of being in the same quartile

at the U. of L. as he is in at L.M.H.S.

Summary: Using the number of quality points gained the first semester as a criterion, and the age when graduated from L.M.H.S. as an item for comparison, the data indicate that age has little effect upon success in college. We may say that a boy over 19 will probably rank below a B average, and if he is in the first or second quartile he will likely average below C. A student 16 years old or younger when graduated will probably receive D or better, but in general no prediction of his success may be made. The 18 year old graduate will most likely average below C, or it might be said more positively that if he is in the first or second quartile he will average below B. Students 20 and older will probably average below B.

Data from the comparison of the same criterion with rank in class tend to show that students in upper quartiles get better grades at the U. of L. than the students in the lower quartiles.

When number of credits in mathematics is used as the item in comparison with the criterion we surmise that boys who average 85% or better took more mathematics than boys who average less than 85%. The answer to whether mathematics increased success in college cannot be given by the available data. The predictive value of amount of mathematics taken is very slight.

The lowest one-third of the graduating classes apparently have a shorter tenure at the U. of L. than do the other graduates, but the difference is not unusually large. The lowest one-third may stay a much longer average time than do the other two-thirds in particular classes.

Nearly one-half of L.M.H.S. graduates who entered the U. of L. between 1930 and 1934 $\frac{1}{2}$ were sons of higher salaried people such as executives, professional people, and merchants. This, however, did not seem to have the anticipated effect upon the quality points earned the first semester, which were fairly evenly divided among the categories regardless of occupation. The predictive value of occupation of parent for success in college is slight. The correlation of grades in L.M.H.S. and scores on the Psychological Placement Test seems to indicate that these two criteria are good predictive items of success in college. A significant degree of relationship is indicated by the correlations of four year English grades in L.M.H.S. with freshman English grades in the U. of L. This condition does not seem to be affected by the size of the classes studied, although it may be true only for these classes.

The graduates in the fourth and third quartiles would be more likely to succeed than graduates in the second and first quartiles. This was to be expected. Students under 19

at the time of graduation from high school may fall into any classification, and those over 19 would probably average under B. Many boys whose high school average was below 85% attained a C or better ranking in college, and a smaller number whose high school average was 85% or above received a college average below C.

Chapter VII

SUMMARY AND CONCLUSION

Chapter VII

SUMMARY AND CONCLUSION

The investigation of the records of 422 L.M.H.S. graduates who entered the U. of L. was undertaken with the thought that a comparison by classes would be of value to both the high school and the college. The study should be of value to the teachers in L.M.H.S. in so much as a knowledge of the success of the graduates would extend the instructors' vision beyond the graduation of their students. The study should be of interest to the faculty of the U. of L. as it presents comparative information about the background of L.M.H.S. graduates. The average student¹ at the U. of L. has been described as a graduate of L.M.H.S. The results of the tabulations should aid counselors of the graduates entering the U. of L. both before and after admission to the college.

Eleven questions were proposed in the introduction to the study, the answers to which were thought to be adequate for the scope of the investigation. Many apparently worthwhile phases suggested by the data could be examined, but because such procedure would cause the report to become unwieldy, the aforementioned questions were used to delimit the scope of the study.

1. The Louisville Courier-Journal, May 8, 1938

Question 1. Do the graduates whose grades are highest enter the U. of L., go to other colleges, or enter no college?

The data for Table 2 are fairly complete, and if the averages of the grades are reliable we may believe that colleges other than the U. of L. get the higher ranking students. The differences do not seem to be appreciable, not nearly so great as the superiority of the graduate who enters the U. of L. over the graduate who does not enter any college.

Question 2. Do the graduates whose I.Q. scores are highest enter the U. of L., go to other colleges, or enter no college?

The data of Table 3 show, within the limits of the scores which were available, that the graduates who obtain the highest I.Q. scores go to colleges other than the U. of L. In one or two classes the group which does not enter college has the highest I.Q. scores. The U. of L. enrolls graduates who rank between the other two groups in I.Q. scores. Perhaps it would be worth while to make an investigation of the high ranking graduates who do not enter college.

Question 3. Is the first year of college more difficult than the second?

The data which have been gathered are not sufficient to answer this question. Too many factors enter into the question to allow any positive or negative reply.

Question 4. Has the age of the L.M.H.S. graduate any significance in his success in the College?

In general the answer would be no. We see, however, from Table 25 that the less mature graduates, chronologically, appear to gain as many quality points the first semester as the older graduates. An explanation of this may be the fact that the younger students are often intellectually superior. The graduates are entering college with no appreciable variation in their ages from year to year as shown by Table 5.

Question 5. When do the lowest one-third of the graduating classes drop out?

On an average the lowest one-third of the graduating classes stay a shorter time in the U. of L. than does the entire class. The data of Table 28 sustain such a statement, the exception being a class in which there are few in the lowest one-third, all of whom apparently take college more seriously than they did high school.

Question 6. Does the rank in the graduating class give an indication of the number of quality points earned the first semester?

The data of Table 4 indicate that the graduates who enter the U. of L. are above the average graduate in rank in the graduating class. The number of credits is well above the number actually necessary to graduate, if the averages in Table 6 may be taken as an index. Table 26, in which the graduates were separated by quartiles, showed that the greatest number of quality points was earned by the graduates in the higher quartiles. We may say that those in the first and second quartiles will probably earn less than the average number of quality points, a fact which may be seen in Table 10. Table 14 shows that in the ten classes studied, fourth quartile students far exceed the three other quartiles in number of chances of attaining high quality point standing. Ninety-six of 100 fourth quartile students will rate a quality point standing of 1.0 or better; 73 of 100 third quartile students will rate the same as compared with 31.5 of 100 in the second quartile and only 11 of 100 in the first quartile.

Question 7. Is there any relation between the occupation of the parent and the success of the graduate the first semester?

The classification of the parents of graduates in Table 29 is such that the range of the percentages is rather small. The compilation of Table 30 would probably be but little

affected by the addition of a larger number of cases. The distribution seems to indicate the fact that there is little if any advantage accruing to a graduate because of the occupation of his parent.

Question 8. Does the study of mathematics increase a student's chances for success in college?

A large number of students take only the required amount of mathematics in high school. Scattered among this number are high ranking students, who have better than average success in college. Table 27 shows that a graduate is not dependent upon the number of credits he has in mathematics for his success in college. The superior students take more than the required number of credits in mathematics usually, but there is no indication that the amount of mathematics makes a student superior in college.

Question 9. Is there any correlation between the I.M.H.S. scholastic average and scores on the Psychological Test?

The data computed in Table 31 imply that the I.M.H.S. scholastic average has a definite relationship to the scores received on the Psychological Test. There is more evidence of this relationship from the data of Table 26 in which the percentages of the quartiles favor a greater number of quality points for the graduate of the fourth or third quartile.

Question 10. Is there any correlation between grades for English in L.M.H.S. and in the U. of L.?

From Table 32 we see indications that there is a definite relation between grades received during four years in L.M.H.S. and grades received the first year in the U. of L. Whether this condition prevails for English for all graduates of L.M.H.S. who attend the U. of L. is not definite, but the positiveness of the correlations seems to create a presumption in that direction.

Question 11. Which group succeeds at the U. of L.?

We divided the L.M.H.S. graduates into four groups according to their high school average. Tables 15, 16, and 17 indicate that students in the highest quartile have a longer tenure than the students in the other quartiles. Obversely the boys in the two lowest quartiles are in attendance a shorter time than the boys in the two highest quartiles. The data for Table 23 show a positive correlation between high school and college grades for the first semester. A similar correlation is shown by Table 24. A graduate whose average is 85% or above, that is, a graduate in one of the two upper quartiles, would receive higher grades than graduates whose averages are below 85%. A boy in the first quartile would receive correspondingly low grades in the U. of L. This is confirmed by Table 13 and Table 26. Table 27 indicates

that the amount of mathematics is not proportional to success. Likewise age is not a determining factor in success, as shown by Table 5 and Table 25.

Conclusion: The average graduate of the L.M.H.S., if we may judge from the ten classes from 1930 through 1934 $\frac{1}{2}$, will be a member of a class of 150, with a high school average of 81.5, and an I.Q. score of 113. He will stand 68th in his class when he is 18 years, one month of age, having earned 33.8 credits. When he takes the Placement Tests at the U. of L., he will attain the 56th percentile on the Psychological Test, the 50th percentile on the English Test, and the 51st percentile on the Reading Test. During his first semester in the College he will earn 12 semester hours and 12 quality points, which will be increased the second semester to 12.8 semester hours and 13 quality points. The fourth semester will find the average graduate earning 13.5 hours and 16 points, with a total of 56 hours and 67 points for the four semesters if he stays that long. The average graduate is a different person in his second year, for many who have made him rather inferior when he was a freshman will no longer be there. He will stay 3.5 semesters, but had he stayed four semesters with a C average he could have taken the Sophomore Comprehensive Tests.

On the Sophomore Comprehensive Tests he would have received a percentile ranking of 68 in Social Studies, 72 in

Foreign Literature, 63 in Fine Arts, 65 in Total General Culture, 55 in Total English, 56 in Literary Acquaintance, 69 in Contemporary Affairs, 65 in General Science, and 60 in World History. He would then have the pleasure of knowing that he ranked well when compared with students in the nation's liberal arts colleges tested as he was.

In his freshman year, the average graduate would enroll in survey courses in English Composition, Introduction to the Study of Society, and the History of Civilization. When he reached the sophomore year he would study a Survey of the Humanities, and a Survey of the Natural Sciences. For all courses he took when he was a freshman he would average a low C, but when he was a sophomore he would improve to a good C average.

Therefore, the average graduate of L.M.H.S. could successfully attend the U. of L.

But what of the value of all this data for predictive purposes? Just what degree of correlation exists between high school and college records? The conclusions for the most part would seem obvious to the layman. While the figures used to substantiate the conclusions may not be sufficiently inclusive, the correlation coefficients for those used are high.

But what of the individual student who detracts from a perfect correlation? The predictive value of the tables

is lowered by the possibility that a low ranking student may be successful in college, or a high ranking student may fail in college. The data show that a good student is more apt to go down than a poor student is to come up. The average student is successful, but often the average student is an imaginary person.

The degree of articulation between L.M.H.S. and the U. of L. is fair but could be improved. Differences in grading, in standards, and in the philosophy of the instructors, causes the articulation to be lower than it should be. The writer recommends a personality chart for each graduate to supplement the records now used in admission procedure. The addition of such a chart might take care of individual differences of graduates. Many tables show the need for some method of providing for individual differences, and the answer would seem to be the personality chart.

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