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University of Minnesota**

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**REPORT OF THE SURVEY
COMMISSION
XI**

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**EVALUATION OF INTERRUPTIONS IN
COLLEGE ATTENDANCE**



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LETTER OF TRANSMITTAL

*President L. D. Coffman,
University of Minnesota.*

DEAR SIR: I am transmitting, herewith, a report on the evaluation of interruptions in college attendance based on scholarship records of the student group in attendance at the University of Minnesota during the year 1926-27.

This report is recommended to you for publication as Number XI of the Survey Series.

Respectfully submitted,

R. M. WEST, *Registrar*

EVALUATION OF INTERRUPTIONS IN COLLEGE ATTENDANCE

INTRODUCTION

In the study of "Student Survival"¹ one of the more significant facts was the large proportion of university students who, from one cause or another, found it necessary or expedient to interrupt their courses of study for a time, but who eventually returned to college and graduated. Of the group of students included in that survey, who first enrolled in the University of Minnesota in September, 1920, 7 per cent had cancelled their registrations before the close of the first fall quarter. By the opening of the fourth year, normally the senior year for the group, 84 per cent had experienced some interruption to their course of study. Some of this number had left the University permanently; some would eventually return to complete the work for a degree; and others had already returned after an interval of one or more quarters. The prevalence of these interruptions was further evidenced by the fact that of the graduating class of 1924 only 35.6 per cent had completed their course of study within the normal four-year period. Thirty per cent represented students admitted with advanced standing from other institutions. The balance, 34.4 per cent, were those who had originally matriculated at the University of Minnesota prior to September, 1920, and who, after lapses of from one quarter to eighteen years, had re-entered the University to complete the necessary work for a degree. A considerable part, too, of the group who had graduated within the four-year period had experienced short interruptions, compensating for them by summer session or extension work.

It is obvious, then, that altho the usual college course is generally thought of as a four-year period, the average time for its completion after high school graduation is well in excess of four years. It seems pertinent to review briefly the more important factors which contribute to this prolongation of the college period.

The study of "Student Mortality"² at the University of Minnesota disclosed the fact that approximately 5 per cent of the total enrolment is excluded each year for low scholarship or disciplinary reasons. In 1922-23, the year covered by that study, there were 1,659 students who dropped out of their own volition or failed to return at the opening of the fall, winter, or spring quarters. The most prevalent reason for this loss was given as "financial" (31.7 per cent). The percentage leaving on account of illness was 19.7 per cent. Smaller numbers left for other reasons, as follows:

¹ *Bulletin of the University of Minnesota*, 28, No. 4, February 10, 1925, "Report of the Survey Commission VII, Student Survival."

² *Bulletin of the University of Minnesota*, 28, No. 8, March 17, 1924, "Report of the Survey Commission VI, Student 'Mortality.'"

| | Per Cent |
|---|----------|
| Transferred to another institution..... | 8.6 |
| Left to enter business field..... | 8.4 |
| Lack of interest or discouraged..... | 7.5 |
| Change of or lack of a definite objective..... | 6.8 |
| Illness or death in the family..... | 3.7 |
| Dissatisfied with some phase of the University..... | 3.2 |
| Removal of family from city or state..... | 2.5 |
| Program or curriculum difficulties..... | 2.5 |
| Needed to help at home..... | 1.5 |
| Wished to obtain practical experience before completing course of study.. | 1.3 |
| Married | 1.2 |
| Opportunity for travel..... | 1.2 |
| Miscellaneous personal reasons..... | 0.5 |

While cancellation in all of these cases was at the student's request, there were, obviously, many instances in which the student had no alternative. On the other hand, financial reasons for cancellation which constitute the largest single cause of student mortality, and result in approximately a third of the withdrawals always represent a comparative situation. Financial stringency for one student might be considered fairly opulent circumstances by another. Cancellation on this account, therefore, might, in a measure, at least, be provided for and prevented if it were possible to demonstrate definitely whether interruptions to the course of study represent an economic loss or gain; whether they result in better or poorer scholarship; whether they detract from the value of the college course or supplement it with experience which contributes to the educational value of the curriculum; whether they should be encouraged or discouraged; and whether, in those cases where no alternative exists, assistance and advice can be given which will minimize such deleterious effects and will accentuate such advantages as might normally result from the interruption to the course of study.

If it is true that the individual who continues from high school to college graduation without interruption is as well or better equipped to compete with that group which from time to time have found it necessary or expedient to intersperse their schooling with practical experience, measures should be taken to reduce the number and the length of these interruptions. When the interruption is unavoidable the institution should encourage so far as possible the eventual return to college, at least on the part of that group whose natural intellectual equipment especially entitles them to the advantages of a full college course.

If, on the other hand, the students who have interrupted their courses of study and with the practical experience which they have gained appear to advantage scholastically in comparison with the other group, the possibility of providing vacation from school with the proper type of employment and the proper guarantee of return might be considered as one of the remedies in special cases, for lack of interest and resulting low scholarship.

There are, of course, so many individual factors involved in a comparison of this kind that it is difficult to generalize with any great assurance of accuracy. It seems entirely possible, however, that the study of a large number of cases may produce some evidence of interest and of value.

This survey was planned with a view to presenting such facts as the scholastic records of a large unselected group of students may contribute toward the solution of the problem.

PROCEDURE

A study was made of the scholarship of all students in residence at the University of Minnesota during the academic year of 1926-27. The only selection attempted was the elimination of those entering prior to 1919-20 or subsequent to April, 1926. The former group were omitted because it was felt that their records would, to a considerable extent, be affected by the war and post-war periods; the latter group because insufficient data on their college work were available at the time of the study.

A total of 4,244 records was included in the survey. These were distributed by colleges as shown in Table I (page 21). Of this group 2,264, or 53.3 per cent, had been in regular attendance up to the time of the study, while 1,980, or 46.7 per cent, had experienced one or more interruptions either between graduation from high school and matriculation at the University or after starting their college courses.

The scholarship ratio was determined by translating the letter grades as follows:

- Each credit hour with a grade of A was given a value of 3
- Each credit hour with a grade of B was given a value of 2
- Each credit hour with a grade of C was given a value of 1
- Each credit hour with a grade of D (lowest passing grade) was given a value of 0
- Each credit hour with a grade of F (fail) was given a value of -1

The total credit hour values divided by the total number of credit hours of registration gives the ratio of scholarship index.

By means of a questionnaire an attempt was made to determine certain facts concerning the interruption to the course of study in individual cases. Information was thus obtained relative to the reason for the interruption, and the type of employment, if employed. The student's opinion as to the value of his or her experience was also requested. The results on this last point are, of course, wholly subjective and as such are of value only as an expression of the student's viewpoint of the problem. Replies were received from 52.3 per cent of those to whom the questionnaire was sent. The distribution of these replies by colleges is shown in Table II.

If it were possible to compare the scholarship of a student after the interruption of his course of study with what his performance in college would have been had no interruption occurred, the problem would be a simple one.

Obviously such a comparison is impossible. However, it is possible to compare the student's scholarship after his return to college with the scholarship which he exhibited before the interruption occurred. It is also possible to compare the scholarship of the entire group of students whose courses of study were interrupted with the scholarship of the group who remained in college. In both the individual and the group comparisons, there are two important factors to take into consideration.

First—The differences in age resulting from the interruption, and

Second—The normal differences in scholarship which appear from one year to another.

COMPARISON OF SCHOLARSHIP WITH AGE AT HIGH SCHOOL GRADUATION

The relation between student age and scholarship has been the subject of considerable study. In general, it has been demonstrated that the younger student is capable of better scholarship than the more mature student, altho frequently less seriousness of purpose and lack of interest materially lower the scholastic record of the former.

The data given in Table III show the scholarship after college entrance by age groups at high school graduation for (a) those students who attended the University without interruption and (b) those whose courses of study were not continuous. The average ages for these two groups at the time of graduation from high school were 17.9 and 18.0 years, respectively. The scholarship for the latter, however, represents work done by a somewhat older group since a portion of the work, in each case, was completed after interruptions ranging from one term to several years.

The students in the upper ages may represent two groups—those whose elementary and secondary school courses were interfered with, thus deferring the time of their graduation from high school, and those whose graduation was retarded by poor scholarship and resulting failure of promotion in the primary and secondary schools.

The lower scholarship for the higher ages, therefore, is at least partially due to a process of selection, and probably not to the loss of scholastic ability in individual students with advancing school age.

Table III shows a consistent relationship between age and scholarship from 15 to 21, inclusive. Above and below those ages the number of cases is too small to be significant. It is also interesting to note that the group who experienced interruption to their courses of study show for each age, except where only a few cases occur, a lower scholarship by from 10 to 25 per cent than those for the corresponding age who completed their college work without interruption.

In evaluating this last comparison, it must be remembered that the scholarship for each group is based on the total record and for those whose college course was interrupted represents the individual's performance both before and after the interruption.

From the results of the study on "Student 'Mortality'" it was apparent that the cause of interruption must also, in many cases, have been at least one factor contributing to lower scholarship. This seemed especially true in cases of illness and financial difficulties, the two largest single factors interfering with continuous college residence.

COMPARISON OF SCHOLARSHIP WITH AGE AT UNIVERSITY ENTRANCE

A somewhat similar relationship as that just shown exists between the scholarship ratio and the age of the student at university entrance. The only additional factor in this case is the regrouping due to those who remained out of school for a time between their graduation from high school and starting of their college course. The general character of the curves resulting from these data is essentially the same as for the comparison between scholarship and high school

graduation. Reference to Table IV will show that the scholarship decreases for each age up to 20. For the ages 20 and 21, however, in spite of the fact that a reasonably large number of cases are included, distinct increases in the scholarship ratio appear. This regrouping, therefore, seems to indicate that the age at college entrance is a less reliable index of scholarship in college than the age at high school graduation.

RELATION BETWEEN SCHOLARSHIP AND YEAR IN COLLEGE

There is still further evidence pointing to lack of correlation between the age of the university student and his scholarship in the fact that the scholarship of any considerable group of students becomes progressively better instead of poorer as the group advances toward college graduation. It seems entirely probable, therefore, that it is the factors which have contributed to delayed high school graduation which are primarily responsible for lower scholarship and advanced age than the fact of maturity itself. If this is true, the increase in age due to interruptions in the college course can be considered as a negligible factor when comparing the scholarship of individual students before and after a period of non-attendance. Table V, for example, shows the scholarship from year to year for those students whose courses of study were not interrupted but who were in residence for two, three, or four years in succession. It should be noted that this comparison is made between identical groups in successive years. With the exception of the fourth and fifth years of the group in residence for five years, there is clearly an improved scholarship for each group for which a sufficient number of cases were available to make the results significant. In general, the scholarship of the same group of students shows an increase of 5.7 per cent the second year over that of the first; 9.1 per cent, the third year over that of the second; and 4.4 per cent, the fourth year over that of the third.

This relationship between the progressive scholarship of students in continuous residence is shown graphically in Chart III. It appears that for any considerable group of students an increase in the scholarship ratio of approximately 6 per cent is to be expected from one year to the next, throughout their course of study.

RELATION BETWEEN SCHOLARSHIP AND TIME OF INTERRUPTION IN COURSE OF STUDY

Table VI shows a comparison of the scholarship ratio before and after the interruption of the course of study for groups classified on the basis of the portion of the college course completed before the interruption took place.

In many instances the same student has left and returned to college more than once with the result that the 1,980 students whose courses of study were interrupted have provided 2,601 cases for comparison. Approximately one half (48.6 per cent) of the interruptions occurred between high school graduation and university entrance. In general, those interruptions occurring before the completion of 40 credits may be considered as having interrupted the first year before its completion. Those occurring after the completion of 40 credits may be considered as occurring after at least one year of residence; those after the completion of 80 credits, two years of residence, etc.

As would be expected from the previous section, there is a noticeable increase in scholarship as the length of time before interruption increases. This ranges from 0.235 as an initial scholarship in the cases of the earliest interruptions to 0.764 for those cases in which the interruption occurred after the completion of 120 to 139 credits. The last group shows a loss in scholarship from 0.764 to 0.656. The number in the group (41) however, is too small to give significance to this discrepancy in the curve. Unlike the data in the previous section, it must be kept in mind that the curve in Table VI which expresses progressively lengthening periods of residence is a comparison between groups composed of different individuals.

The most interesting feature of the data in Table VI, however, is the percentage of increase in scholarship after return to college as compared with the scholarship of the same students prior to the interruption. It will be noticed that this increase is several times as great as was found to be the normal increase from year to year for those who remained in continuous residence.

Altho there is no basis for a comparison in scholarship before and after interruption in the case of those who deferred their college entrance after high school graduation, the average scholarship ratio for the group is higher than for any group of those experiencing interruptions later in the course of study.

The largest percentage increase following return to college (218.3 per cent) is found in the group of cases of interruption during the freshman year. The percentage decreases with increasing initial scholarship up to the last group in which the interruption occurred in the senior year, where an increase to 68.8 per cent is shown. Chart IV gives a graphic representation of these scholarship ratios.

RELATION BETWEEN SCHOLARSHIP AND EXTENT OF INTERRUPTION TO COURSE OF STUDY

The length of the period of interruption to the course of study as a factor affecting scholarship was examined by classifying the cases of interruption as shown in Table VII. The cases occurring prior to college entrance were grouped separately since no index of scholarship prior to the interruption is available in terms comparable with the scholastic grades for college work. In those cases in which an absence from college adjoined a normal vacation period the length of the vacation was included.

In those cases in which the break came between high school and the University there appears to be a slight increase in the scholarship ratio corresponding to the lengthening time of the interruption. Exceptions to this general tendency appear, however, notably in the first group in which the interval was only three months and in which the scholarship ratio was the highest. In general, the increase in scholarship with lengthening period of interruption appears no greater than the increase in scholarship ratio from year to year for those students who continued in school.

In comparing the percentages of increase in the scholarship ratio based on the scholarship before and after the interruption, there seems to be no relation between the length of the period of interruption, within the limits of the study, and its effect on scholarship.

RELATION BETWEEN SCHOLARSHIP AND CAUSE OF INTERRUPTION

While in general the student's scholarship appears to have been increased by interruptions in greater measure than the normal increase incident to progress in the course of study, on the one hand; on the other, a comparison of the total scholarship of those who have interrupted their course of study with the scholarship of the group that have been able to carry their college work continuously shows a higher scholarship ratio in the latter group.

Obviously the interruptions in some cases were required by the University for scholastic deficiencies and in other cases, the causes which necessitated discontinuance of studies such as illness, finances, etc., contributed also to low scholarship.

Improved scholarship on return to college, therefore, cannot be definitely ascribed to the experience gained during the interim as the sole factor. Possibly the most important features of the interruption so far as scholarship is concerned are the removal of the causes originally contributing to low scholarship and the new incentives for a successful college career resulting from the student's outside experience. The student who returns after an absence with improved health, better financial resources, and improved interest reflects these changed conditions in his scholarship.

So far as greater interest and increased determination are factors in the total result, they can be definitely seen as a result of the outside experience.

The questionnaire sent to all students whose courses were interrupted provides some additional information of interest.

The reasons for the interruption are listed in Table VIII. In this, as in previous tables, due consideration must be given to the group in which the number of cases is small. The largest single items contributing to interruptions were finances, illness, scholastic delinquency, curriculum and program difficulties, home conditions (illness, etc.) and desire for experience. The more significant factors resulting in a delay in entering college after high school graduation were finances, desire to enter at the opening of a college year, lack of definite objective, illness, age, desire for experience, and entrance deficiencies.

For those who deferred college entrance no very definite basis for scholarship comparison is available. For all of the groups in which the numbers are large enough to be significant, however, the scholarship after entering college averages more than one honor point per credit. This would indicate that the deferred entrance had in no way handicapped this group of students. The highest scholarship group, as might be expected from a previous section of the report, was that represented by students who graduated at an early age from high school and who felt, or whose parents felt, that they would profit more from a college education by deferring their admission.

In the groups for which interruptions for various reasons occurred during their college course, direct comparisons can be made of the scholarship of the same students before and after interruptions. The largest percentage of gain appears in the case of students dropped for low scholarship. This income was from an index of 0.005 to 0.655, or 1300 per cent. In the case of other groups in which the number of cases was sufficiently large to be significant, there was a fairly uniform increase in scholarship ranging from 30 to 35 per cent.

It is particularly interesting to note that for the group of 22 students who left college because of lack of interest, the scholarship index on their return showed an increase of over 96 per cent.

The smallest increase occurred in the cases of those whose courses were interrupted on account of program or curriculum difficulties. The index in this instance increased only 13.3 per cent.

RELATION OF SCHOLARSHIP TO TYPE OF EMPLOYMENT DURING INTERRUPTION

The questionnaire sent to students whose course of study had been interrupted showed that of those who replied 1,026, or 78.5 per cent, were employed during the interval.

The various positions held were classified as carefully as possible on the basis of the student's statement as to his specific responsibilities. The scholarship for each group before and after the interruption is shown in Table IX. Only 1,004 cases were available for this comparison as a number who stated that they were employed failed to describe the nature of the employment. Of this group a little more than half, 54.6 per cent, were cases of interruption between high school graduation and college entrance. Following their admission to college, strangely enough the group with managerial experience in responsible positions showed the poorest scholarship with an index figure of only 0.838 as compared with the group employed at farm labor who showed an average scholarship of 1.382. In order of their scholarship, the groups would be listed as follows: farm labor, 1.382; clerical positions, 1.260; teaching and professional work, 1.247; unskilled labor, 1.183; skilled labor, 1.178; semi-skilled labor, 1.148; clerking, 1.094; and managerial positions, 0.838. Due allowance must of course be made for an over-emphasis of the importance and responsibilities which may have been ascribed to positions held in some cases. However, it appears doubtful whether the type of position in itself can be considered to have any significance as a factor in determining scholarship.

The data for students whose interruption occurred after entering college, of course, afford a better basis for comparison since they eliminate to a greater degree individual differences.

The highest increase in the scholarship index appears for the skilled labor group, 76.1 per cent, the others in order of their percentage increase are: semi-skilled labor, 54.6 per cent; farm labor, 51.4 per cent; managerial positions, 45.7 per cent; clerical, 43.9 per cent; unskilled labor, 41.2 per cent; clerking, 39.8 per cent; and teaching and other professional positions the lowest, with an index percentage increase of only 23.0 per cent. However, it should be noted that the last group had the highest original scholarship index and next to the highest final index.

Apparently, therefore, the significant conclusion to be drawn from these data is that the groups with the lowest original scholarship index such as those going into unskilled and semi-skilled labor, skilled labor and farm labor and clerking, were a result largely of lack of interest in college education which was later stimulated by contrast with the type of ideals in which these individuals found themselves on leaving college. On return to the University, increased interest and greater

application may have been a direct result of their comparatively less interesting employment.

A further classification of these groups is shown in Table X based on whether or not the employment followed during the period of interruption was related to the objective of the college course. The results of this comparison are not significant.

Of those who entered employment between high school and college, 175 were in positions related to their ultimate objective and on entering college showed a scholarship index of 1.249 or only 0.070 higher than the average for the 379 who were occupied in work not related to their objective.

In the comparison of those who went to work after entering college, 160 were employed in related, and 312 in unrelated, occupations. The percentage increase in the scholarship index for the former group was 52.0 per cent as compared with 43.4 per cent for those in work of an unrelated nature.

EXPRESSION OF STUDENT OPINION

The questionnaire sent to students whose courses of study had been interrupted also asked for their opinion concerning first, whether an interruption for practical experience was desirable and second, if desirable, at what time during the course of study would such an interruption prove of most value.

The answers to the first question "Would you advise a student to obtain at least a year of practical experience before completing his college course?" were tabulated with the following results:

| | |
|--|-------|
| Number answering "Yes" without qualifications..... | 621 |
| Number answering "Yes, unless objective fully determined"..... | 33 |
| Number answering "Yes, if employment is in line with objective"..... | 24 |
| Number answering "No" | 246 |
| Doubtful | 30 |
| Number not answering..... | 82 |
| Total | 1,036 |

In answer to the question, "At what time during the course do you believe this experience would prove of greatest value?" the results of the questionnaire were as follows:

| | |
|---|-------|
| Between high school graduation and freshman year..... | 269 |
| Between freshman and sophomore years..... | 101 |
| Between sophomore and junior years..... | 198 |
| Between junior and senior years..... | 62 |
| Following senior year | 2 |
| Summer vacations only..... | 9 |
| Whenever student loses interest in school work..... | 8 |
| Coincident with college work..... | 4 |
| As soon as objective has been determined..... | 4 |
| Doubtful | 38 |
| No replies | 341 |
| Total | 1,036 |

These replies cannot be considered of great value or significance but are interesting as representing the viewpoint of those students who have themselves experienced the interruptions.

SUMMARY

The essential features of the survey may be summarized as follows:

1. The purpose of the study was to determine by comparing the scholarship of large unselected groups of students whether on the one hand, any definite value is to be found in interruptions to the normal course of study, or whether on the other hand, the large numbers of interruptions which do occur represent a distinct loss.

2. The project involved a study of 4,244 records (all students in residence during the academic year 1926-27 who had matriculated prior to 1919-20 and who had completed at least one full year of work). Of this group 2,264 students had been in uninterrupted attendance since high school graduation and 1,980 had experienced one or more interruptions to their courses of study. Of this later group approximately one half of the interruptions occurred between high school graduation and college entrance.

3. Student age as a factor in the study was determined by comparing the scholarship of consecutive age groups both at graduation from high school and at college entrance. In the former a definite relationship is evident between the ages of 15 to 21 inclusive. The age groups above and below those limits included too few cases to give significant results. In general the scholarship in college is higher for those students who completed their high school course at an early age.

4. The comparison between scholarship and age of college entrance, on the other hand, shows nothing of significance and indicates that the actual age of the college student is not an important factor affecting performance in college and may be neglected in comparing scholarship of identical groups before and after an interruption to the college course.

5. A comparison of the scholarship of identical groups from year to year throughout their college course shows a constantly increasing scholarship ratio from one year to another averaging approximately 6 per cent a year. The variation in this increase ranges from 4.4 to 9.1 per cent.

6. A comparison of increase in scholarship following interruptions in the course of study as related to the amount of college work completed before the interruption occurred shows the following:

a. An increase in scholarship before leaving college varying with the amount of work completed before the interruption takes place.

b. A decreasing percentage of increase in scholarship ratio following the return to college varying from 218.3 per cent for those leaving during the freshman year to 33.8 per cent for those leaving prior to or during their fourth year in the University.

c. The highest scholarship ratio in the case of the group which remained out of school for a time following high school graduation.

7. So far as a comparison of identical groups is possible the scholarship following the interruption shows a percentage increase many times that which is found to occur normally from year to year for those students who remained in residence to the completion of their course of study. This was found to be true irrespective of the basis of classification of the cases studied.

8. No significant relationship appears to exist between increase in scholarship and the varying lengths of the interruptions which occurred.

9. The largest percentage increases in scholarship following return to college occurred in those groups of cases in which the initial scholarship was the lowest and in which the reason for leaving college was attributable to illness, financial conditions, loss of interest, and such other factors as might obviously have contributed to the character of the scholarship before cancellation and which conceivably might have been altered materially by the time of return to college.

10. A study of the occupation of the student during the period of interruption to his course of study, as a factor in affecting his scholarship on return disclosed the fact that approximately 78.5 per cent were regularly employed during the interim. Of the group so employed between high school graduation and college the scholarship after college entrance decreased by employment groups in the following order: (1) farm labor, (2) clerical work, (3) teaching and other professional work, (4) unskilled labor, (5) skilled labor, (6) semi-skilled labor, (7) clerking and salesmanship, and (8) managerial positions.

In those cases in which the interruption occurred after college entrance, the highest initial scholarship was found in the group who left for teaching and other professional work. The others showed decreasing scholarship in the following order: (1) managerial positions, (2) clerical work, (3) farm labor, (4) clerking and salesmanship, (5) semi-skilled labor, (6) skilled labor, and (7) unskilled labor.

On the other hand, the percentage of increase in the scholarship ratio after return to college by employment groups was from highest to lowest in the following order: (1) skilled labor, (2) semi-skilled labor, (3) farm labor, (4) managerial positions, (5) clerical work, (6) unskilled labor, (7) clerking and salesmanship and (8) teaching and other professional work.

11. A classification based on the character of the work done and its relation to the student's main objective in college showed no significant results.

12. The conclusions to be drawn from the study are briefly:

That the question of whether or not an interruption to the course of study is advisable is a highly individual one.

That, in general, interruptions result in distinctly better scholarship after return to college. This increase in scholarship is greater than the normal increase from year to year which was found by comparing the scholarship of identical groups for successive years.

That the specific type of employment during the interruption has no definite relation to later failure or success, but that the experience of whatever character, appears to be directly responsible for renewed incentive and greater interest on return to college.

That in those cases where ill health, financial difficulties, or other remediable causes are contributing to poor scholastic results, an interruption sufficient for their removal would not be serious and might prove to be a distinct advantage.

That a period of employment may prove to be the best medium for a proper readjustment of values with respect to college education.

That altho scholarship may be improved it is still possible that the economic loss due to the delay in completion of the course of study would warrant special assistance in those cases where financial conditions are interfering with the proper scholastic achievement.

That college advisory groups and officers should give attention not only to students continuing in college but to those who are faced with the apparent neces-

sity of leaving college. Assistance should be given in determining whether or not the cancellation is necessary and whether or not an interruption may prove advantageous as a means of orientation and proper selection of a suitable objective.

The institution might also with profit maintain some contact with students who have left college as a basis for encouraging reregistration in those cases where distinct ability and promise of achievement exist.

CHART I
DISTRIBUTION OF RECORDS INCLUDED IN THE SURVEY

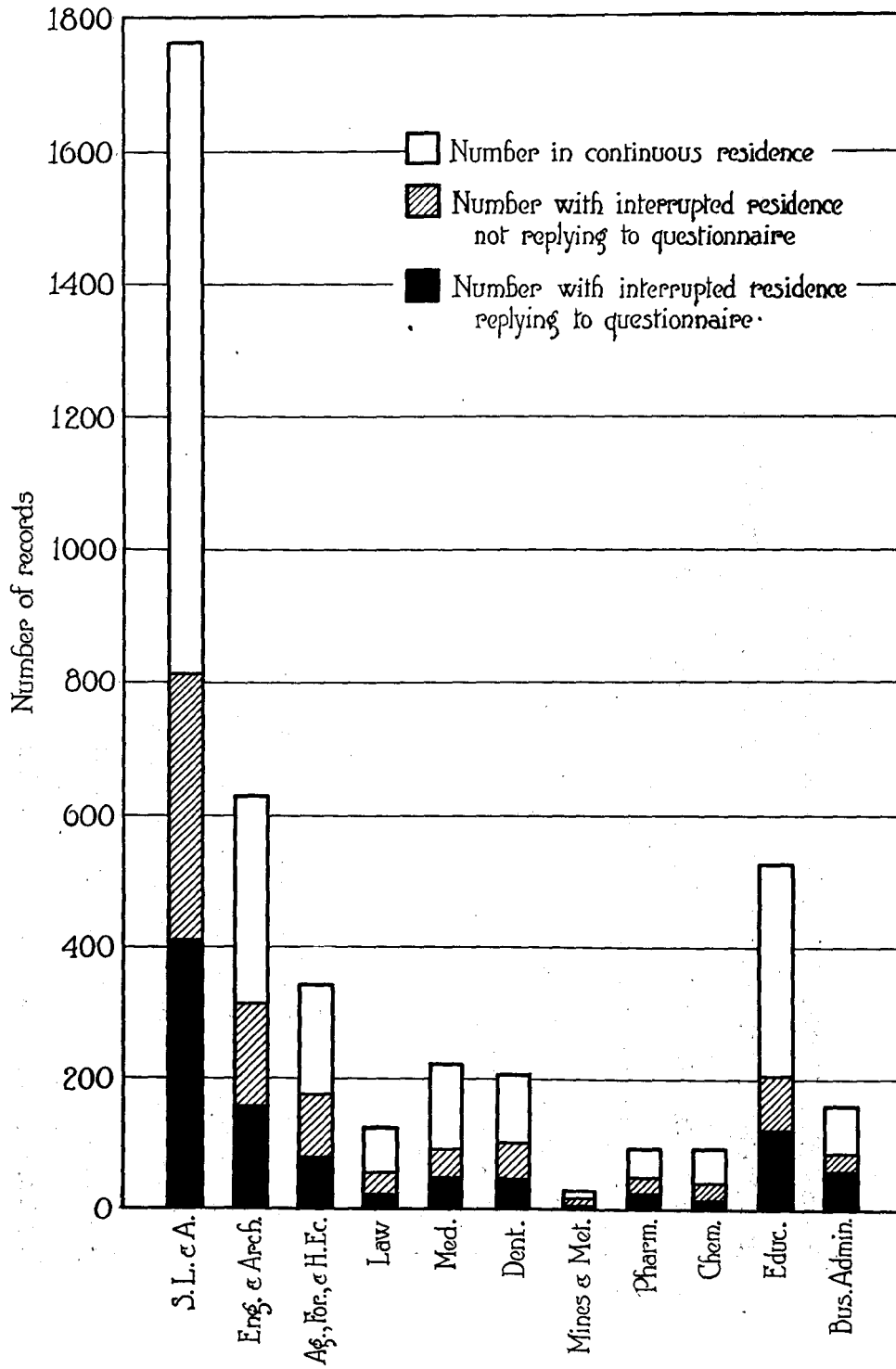


CHART II
 COMPARISON OF SCHOLARSHIP IN COLLEGE AND AGE AT GRADUATION FROM
 HIGH SCHOOL

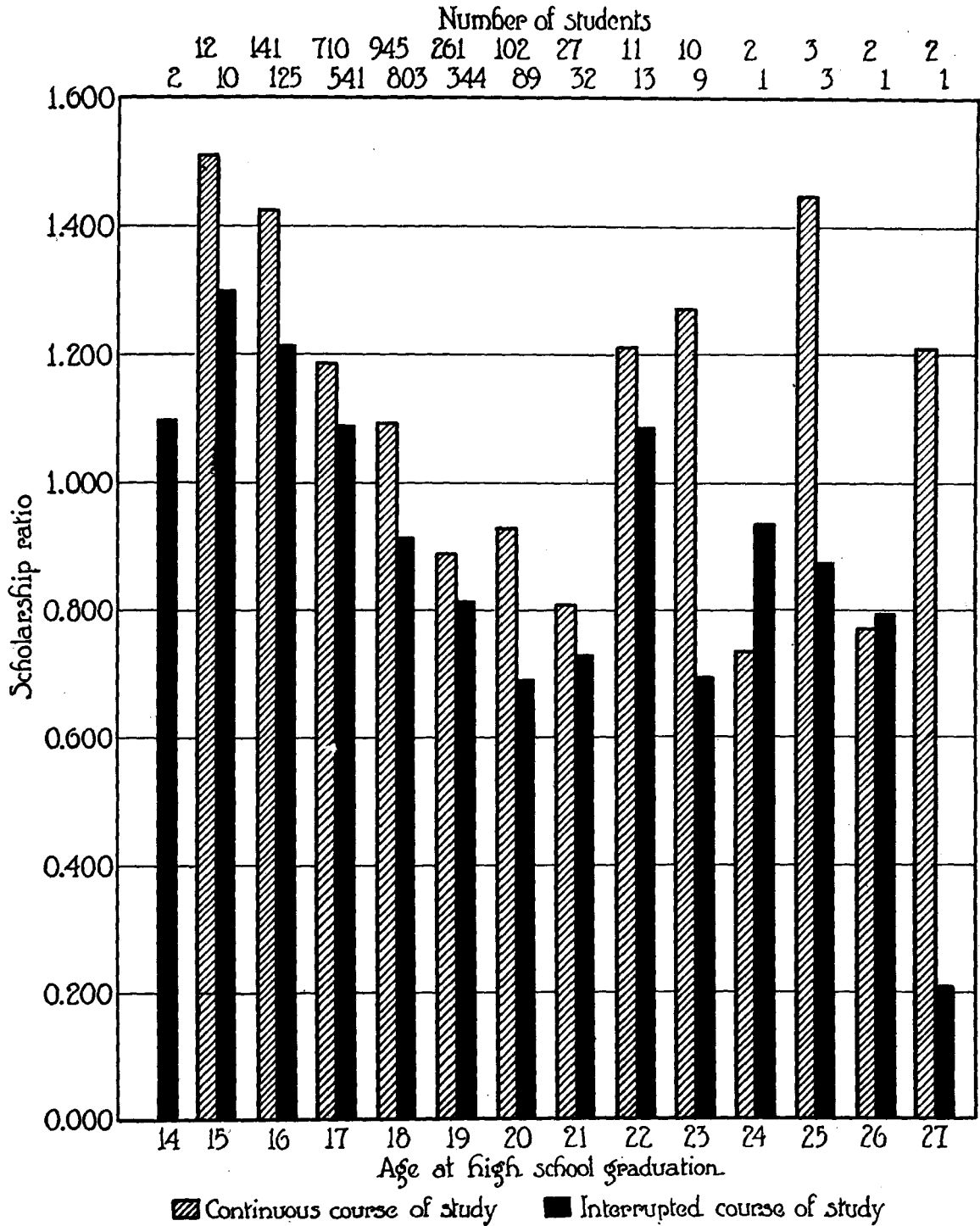


CHART III
 COMPARISON OF SCHOLARSHIP OF IDENTICAL STUDENT GROUPS FOR SUCCESSIVE
 YEARS

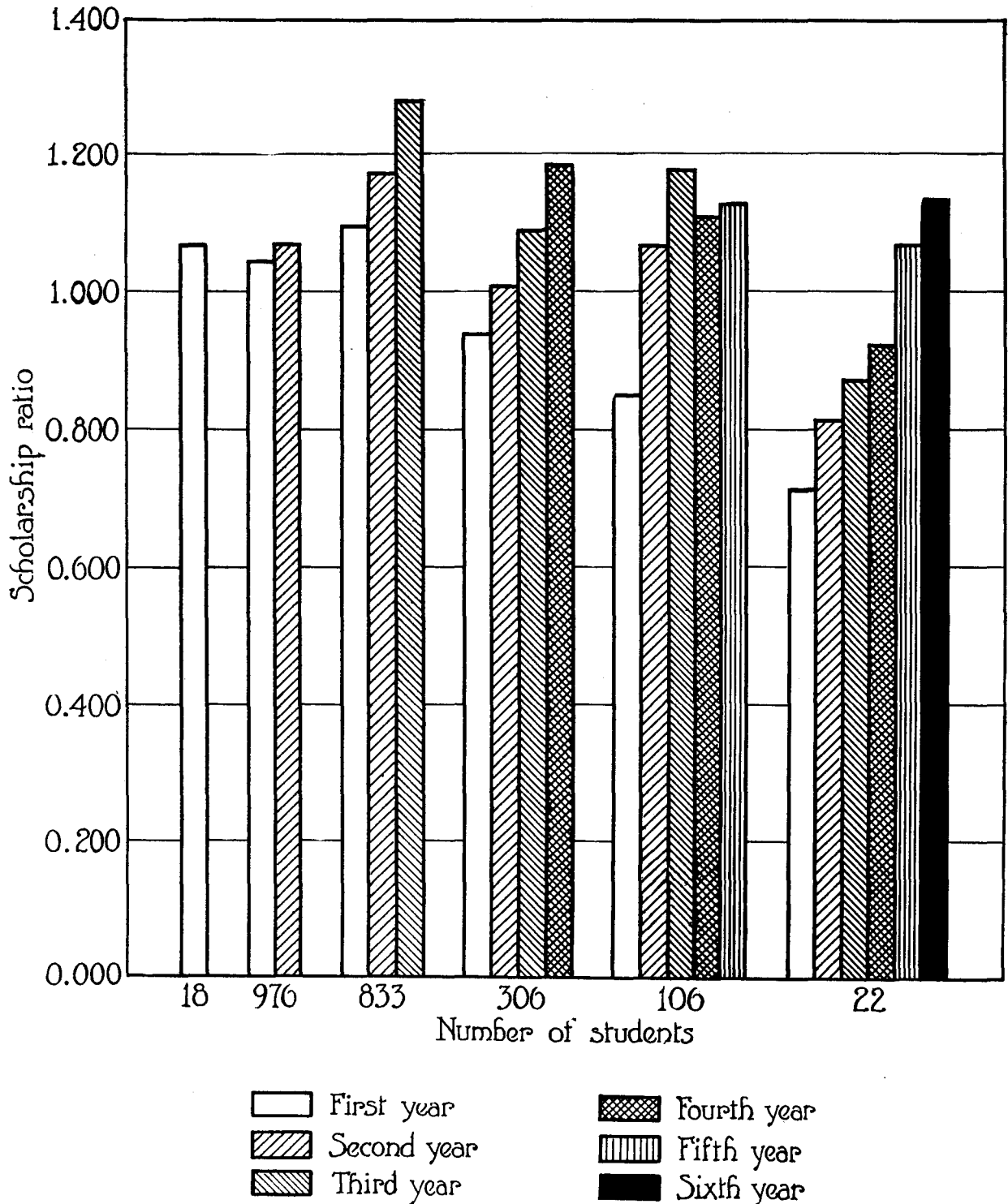


CHART IV
 COMPARISON OF SCHOLARSHIP BEFORE AND AFTER INTERRUPTION OF COURSE OF
 STUDY AS RELATED TO THE AMOUNT OF WORK COMPLETED
 BEFORE LEAVING COLLEGE

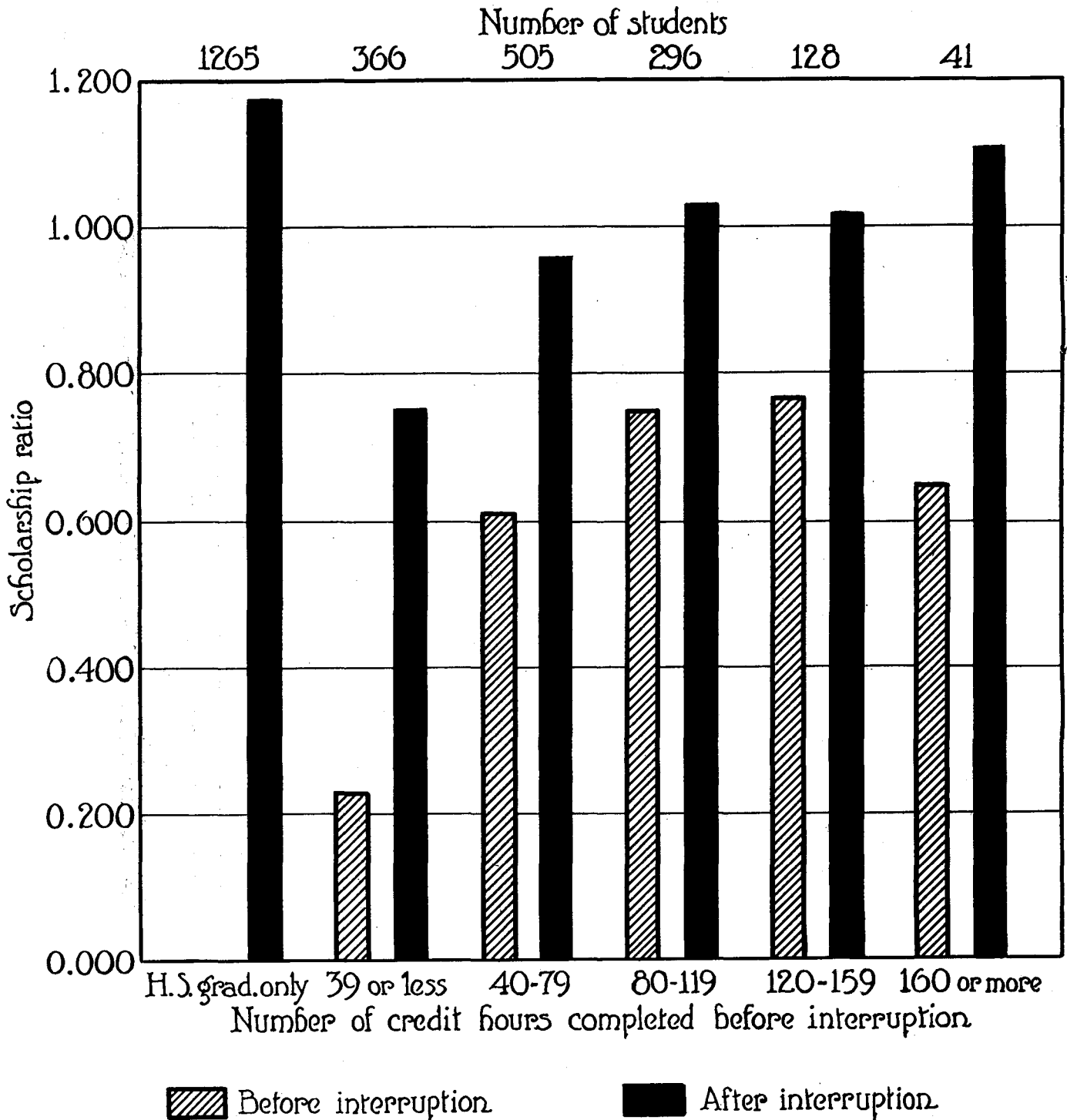


CHART V
 COMPARISON OF SCHOLARSHIP BEFORE AND AFTER INTERRUPTION OF COURSE OF
 STUDY AS RELATED TO THE CAUSE OF LEAVING COLLEGE

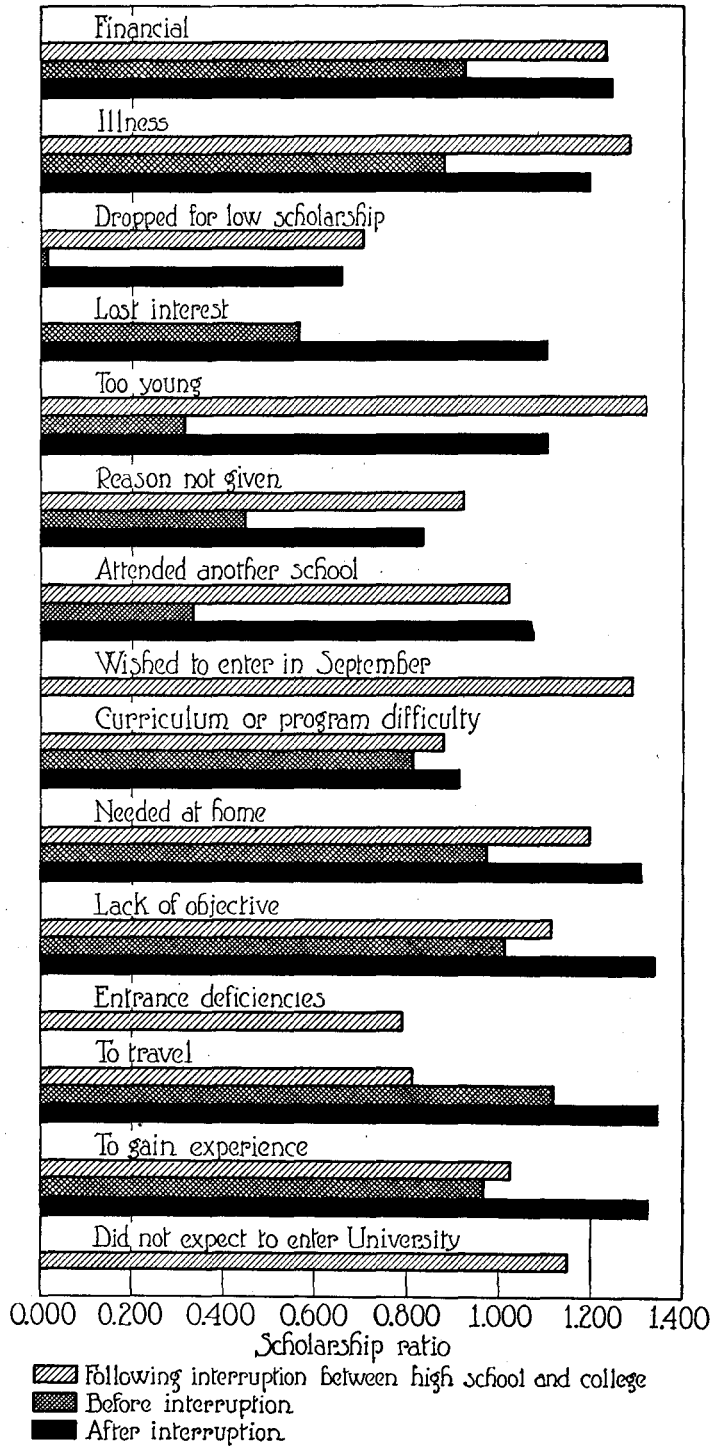


CHART VI
 COMPARISON OF SCHOLARSHIP BEFORE AND AFTER INTERRUPTION OF COURSE OF
 STUDY AS RELATED TO TYPE OF EMPLOYMENT DURING THE
 PERIOD OF INTERRUPTION

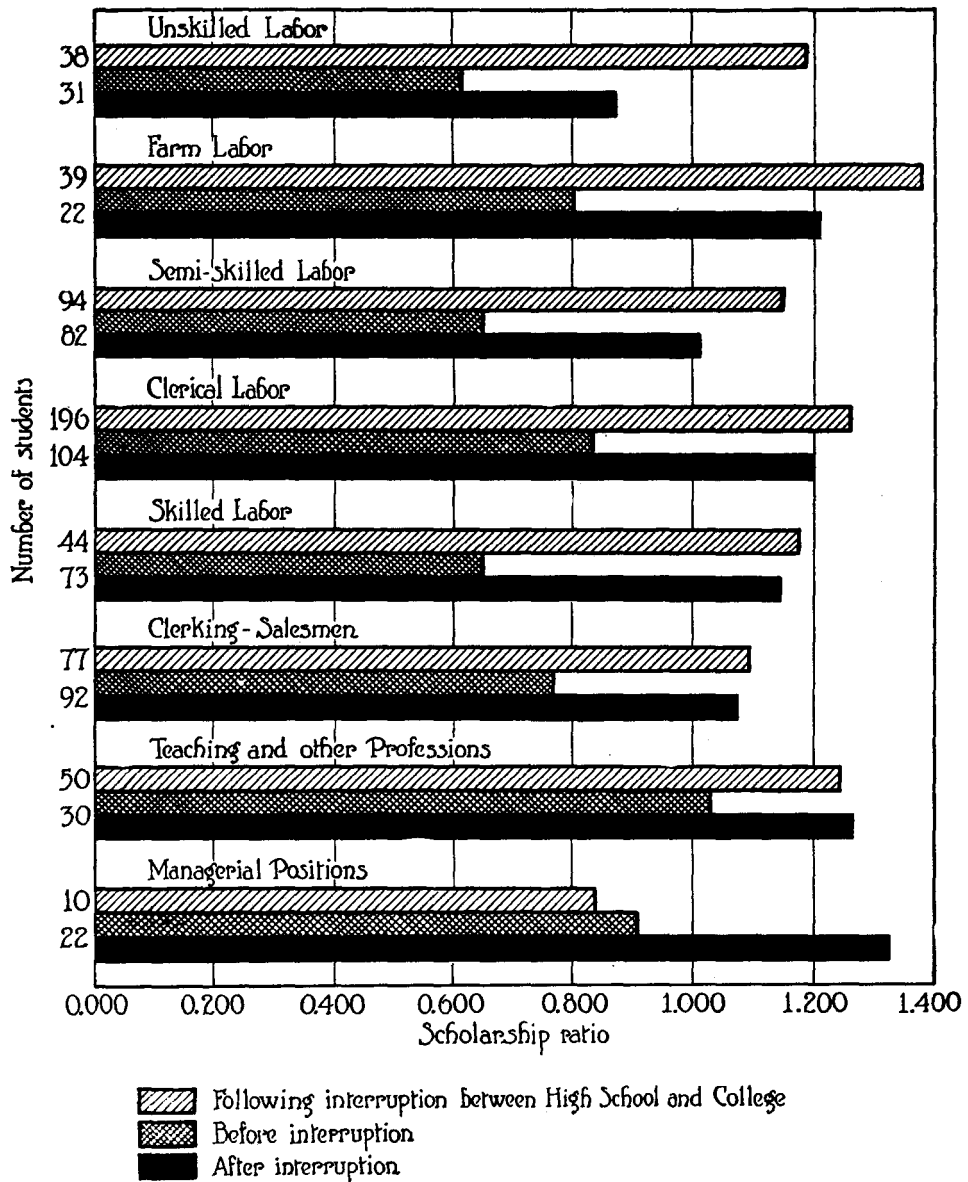


TABLE I
DISTRIBUTION OF CASES INCLUDED IN THE SURVEY

| College or School | Number of Students with Courses of Study | | Total |
|---|---|-------------|-------|
| | Uninterrupted | Interrupted | |
| Science, Literature, and the Arts..... | 963 | 809 | 1,772 |
| Engineering and Architecture..... | 312 | 317 | 629 |
| Agriculture, Forestry, and Home Economics.. | 177 | 179 | 356 |
| Law | 67 | 68 | 135 |
| Medicine | 127 | 96 | 223 |
| Dentistry | 102 | 104 | 206 |
| Mines and Metallurgy | 15 | 21 | 36 |
| Pharmacy | 43 | 54 | 97 |
| Chemistry | 56 | 43 | 99 |
| Education | 321 | 205 | 526 |
| Business Administration | 81 | 84 | 165 |
| Total | 2,264 | 1,980 | 4,244 |

TABLE II
DISTRIBUTION OF REPLIES TO QUESTIONNAIRE TO STUDENTS WHOSE
COURSES OF STUDY WERE INTERRUPTED

| College or School | Replied to Questionnaire | | Did Not Reply | | Total |
|--|-----------------------------|----------|---------------|----------|-------|
| | Number | Per cent | Number | Per cent | |
| Science, Literature, and the Arts..... | 412 | 50.9 | 397 | 49.1 | 809 |
| Engineering and Architecture..... | 168 | 53.0 | 149 | 47.0 | 317 |
| Agriculture, Forestry, and Home Economics | 84 | 46.9 | 95 | 53.1 | 179 |
| Law | 37 | 54.4 | 31 | 45.6 | 68 |
| Medicine | 55 | 57.3 | 41 | 42.7 | 96 |
| Dentistry | 50 | 48.1 | 54 | 51.9 | 104 |
| Mines and Metallurgy..... | 10 | 47.6 | 11 | 52.4 | 21 |
| Pharmacy | 24 | 44.5 | 30 | 55.5 | 54 |
| Chemistry | 15 | 34.9 | 28 | 65.1 | 43 |
| Education | 122 | 59.5 | 83 | 40.5 | 205 |
| Business Administration | 59 | 70.3 | 25 | 29.7 | 84 |
| Total | 1,036 | 52.3 | 944 | 47.7 | 1,980 |

TABLE III
COMPARISON OF SCHOLARSHIP WITH AGE OF GRADUATION FROM
HIGH SCHOOL

| Age | Uninterrupted Course | | Interrupted Course | | Scholarship Differential Per Cent | All Cases | |
|---------------|----------------------|-------------|--------------------|-------------|--------------------------------------|-----------|-------------|
| | No. | Scholarship | No. | Scholarship | | No. | Scholarship |
| 14 | ..... | ..... | 2 | 1.098 | ..... | 2 | 1.098 |
| 15 | 12 | 1.513 | 10 | 1.302 | -13.9 | 22 | 1.417 |
| 16 | 141 | 1.424 | 125 | 1.217 | -14.5 | 266 | 1.327 |
| 17 | 710 | 1.185 | 541 | 1.084 | - 8.5 | 1251 | 1.141 |
| 18 | 945 | 1.091 | 803 | 0.908 | -16.8 | 1748 | 1.007 |
| 19 | 261 | 0.893 | 344 | 0.811 | - 9.2 | 605 | 0.847 |
| 20 | 102 | 0.929 | 89 | 0.694 | -25.3 | 191 | 0.819 |
| 21 | 27 | 0.806 | 32 | 0.724 | -10.2 | 59 | 0.762 |
| 22 | 11 | 1.206 | 13 | 1.081 | -10.3 | 24 | 1.138 |
| 23 | 10 | 1.270 | 9 | 0.696 | -45.2 | 19 | 0.998 |
| 24 | 2 | 0.736 | 1 | 0.933 | +26.8 | 3 | 0.801 |
| 25 | 3 | 1.442 | 3 | 0.873 | -39.5 | 6 | 1.157 |
| 26 | 2 | 0.762 | 1 | 0.787 | + 3.3 | 3 | 0.770 |
| 27 | 2 | 1.206 | 1 | 0.205 | -83.0 | 3 | 0.872 |
| 28 | ..... | ..... | .. | ..... | ..... | .. | ..... |
| 29 | 2 | 0.495 | .. | ..... | ..... | 2 | 0.495 |
| 30 | 1 | 1.417 | .. | ..... | ..... | 1 | 1.417 |
| Age not given | 33 | ..... | 6 | ..... | ..... | 39 | ..... |
| Total | 2,264 | ..... | 1980 | ..... | ..... | 4244 | ..... |
| Average age | ..... | 17.9 | ..... | 18.0 | ..... | ..... | 17.9 |

TABLE IV
COMPARISON OF SCHOLARSHIP WITH AGE AT UNIVERSITY ENTRANCE

| Age | Uninterrupted Course | | Interrupted Course | | Scholarship Differential Per Cent | All Cases | |
|---------------|----------------------|-------------|--------------------|-------------|--------------------------------------|-----------|-------------|
| | No. | Scholarship | No. | Scholarship | | No. | Scholarship |
| 14 ..... | .... | .... | 1 | 0.789 | ..... | 1 | 0.789 |
| 15 | 7 | 1.688 | 1 | 0.556 | -67.1 | 8 | 1.575 |
| 16 | 86 | 1.464 | 29 | 1.047 | -28.5 | 115 | 1.359 |
| 17 | 523 | 1.213 | 220 | 1.040 | -14.3 | 743 | 1.162 |
| 18 | 1,026 | 1.117 | 562 | 0.948 | -15.1 | 1588 | 1.057 |
| 19 | 377 | 0.955 | 558 | 0.877 | - 8.2 | 935 | 0.907 |
| 20 | 127 | 0.845 | 325 | 0.963 | +14.0 | 452 | 0.930 |
| 21 | 33 | 0.947 | 139 | 0.918 | - 3.1 | 172 | 0.923 |
| 22 | 21 | 1.109 | 68 | 1.058 | - 4.6 | 89 | 1.070 |
| 23 | 13 | 1.181 | 22 | 0.967 | -18.1 | 35 | 1.046 |
| 24 | 10 | 1.076 | 17 | 1.019 | - 5.3 | 27 | 1.040 |
| 25 | 8 | 1.030 | 10 | 1.241 | +20.5 | 18 | 1.147 |
| 26 | 9 | 1.337 | 11 | 0.986 | -26.2 | 20 | 1.144 |
| 27 | 4 | 1.153 | 3 | 1.225 | + 6.2 | 7 | 1.184 |
| 28 | 3 | 0.690 | 7 | 1.207 | +98.2 | 10 | 1.028 |
| 29 | 9 | 0.820 | 1 | 0.368 | -55.1 | 10 | 0.775 |
| 30 | 1 | 1.417 | .. | .... | ..... | 1 | 1.417 |
| 31 | 2 | 1.102 | 2 | 1.592 | +44.5 | 4 | 1.347 |
| 32 ..... | .... | .... | 1 | 1.747 | ..... | 1 | 1.747 |
| 33 ..... | .... | .... | 1 | 1.823 | ..... | 1 | 1.823 |
| 36 | 2 | 1.906 | .. | .... | ..... | 2 | 1.906 |
| Not ind. | 7 | .... | 2 | .... | ..... | .. | .... |
| Total | 2,264 | 1.109 | 1,980 | 0.949 | ..... | .. | .... |

TABLE V
COMPARISON OF SCHOLARSHIP OF IDENTICAL GROUPS WITH YEAR IN COLLEGE

| No. of Years Residence | No. | First Year | Second Year | | Third Year | | Fourth Year | | Fifth Year | | Sixth Year | |
|--|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | Scholar- ship | Scholar- ship | Per cent gain | Scholar- ship | Per cent gain | Scholar- ship | Per cent gain | Scholar- ship | Per cent gain | Scholar- ship | Per cent gain |
| 1 | 18 | 1.069 | .... | ... | .... | ... | .... | ... | .... | ... | .... | ... |
| 2 | 976 | 1.045 | 1.070 | 2.4 | .... | ... | .... | ... | .... | ... | .... | ... |
| 3 | 833 | 1.099 | 1.175 | 6.9 | 1.281 | 9.0 | .... | ... | .... | ... | .... | ... |
| 4 | 306 | 0.940 | 1.009 | 7.3 | 1.097 | 8.7 | 1.181 | 7.7 | .... | ... | .... | ... |
| 5 | 106 | 0.849 | 1.063 | 25.2 | 1.178 | 10.8 | 1.125 | -4.5 | 1.150 | 2.2 | .... | ... |
| 6 | 22 | 0.709 | 0.813 | 14.7 | 0.863 | 6.1 | 0.921 | 6.7 | 1.065 | 15.6 | 1.136 | 6.7 |
| More than 6 years..... | (6) | .... | .... | ... | .... | ... | .... | ... | .... | ... | .... | ... |
| Total | 2,264 | 1.040 | 1.099 | ... | 1.224 | ... | 1.154 | ... | 1.135 | ... | 1.136 | ... |
| Total for those continuing in resi- dence the following year..... | .... | 1.040 | 1.122 | 5.7 | 1.105 | 9.1 | 1.090 | 4.4 | 1.065 | 4.1 | .... | 6.7 |

TABLE VI
RELATION BETWEEN SCHOLARSHIP AND PORTION OF COURSE OF STUDY
COMPLETED BEFORE ITS INTERRUPTION

| Time of Interruption | Cases | | Scholarship | | Per Cent Increase |
|--|-------|----------|-------------|-------|-------------------|
| | No. | Per cent | Before | After | |
| Between high school and university..... | 1,265 | 48.6 | .... | 1.175 | .... |
| After completion of 39 credits or less..... | 366 | 14.1 | 0.235 | 0.748 | 218.3 |
| After completion of 40 to 79 credits | 505 | 19.4 | 0.607 | 0.960 | 58.2 |
| After completion of 80 to 119 credits | 296 | 11.4 | 0.753 | 1.031 | 36.9 |
| After completion of 120 to 159 credits | 128 | 4.9 | 0.764 | 1.022 | 33.8 |
| After completion of 160 credits or more | 41 | 1.6 | 0.656 | 1.107 | 68.8 |
| Totals | 2,601 | 100.0 | 0.554 | 1.048 | 89.2 |

TABLE VII
RELATION OF SCHOLARSHIP TO LENGTH OF PERIOD OF INTERRUPTION

| Length of Interruption | Between H. S. and University | | | After Entering University | | | Per Cent Increase |
|------------------------|------------------------------|-------------|-------------------|---------------------------|--------|-------|-------------------|
| | No. | Scholarship | Compared with av. | Scholarship | | | |
| | | | | No. | Before | After | |
| 3 months | 9 | 1.392 | +0.182 | 169 | 0.662 | 0.907 | 37.0 |
| 4- 6 months | 97 | 0.780 | -0.430 | 465 | 0.576 | 0.918 | 59.4 |
| 7- 9 months | 247 | 1.003 | -0.207 | 248 | 0.310 | 0.736 | 137.4 |
| 10-12 months | 23 | 1.017 | -0.193 | 91 | 0.559 | 0.962 | 72.1 |
| 13-15 months | 463 | 1.055 | -0.155 | 169 | 0.770 | 1.199 | 55.7 |
| 16-18 months | 30 | 1.107 | -0.103 | 45 | 0.516 | 0.919 | 78.1 |
| 19-23 months | 42 | 0.931 | -0.279 | 31 | 0.189 | 0.697 | 268.8 |
| 24-35 months | 212 | 1.107 | -0.103 | 80 | 0.650 | 1.046 | 60.9 |
| 36-47 months | 73 | 1.153 | -0.057 | 17 | 0.503 | 0.805 | 60.0 |
| 48-71 months | 36 | 1.323 | +0.113 | 13 | 0.731 | 1.346 | 84.1 |
| More than 72 months... | 28 | 1.352 | +0.142 | 3 | 0.363 | 1.374 | 278.5 |
| Totals | 1,260 | 1.210 | ..... | 1,331 | 0.554 | 0.928 | 67.5 |

TABLE VIII
COMPARISON OF SCHOLARSHIP WITH REASON FOR INTERRUPTION OF
COURSE OF STUDY

| Reason for Interruption | Following High School | | No. | During College Course | | | |
|--|-----------------------|-------------|-----|-----------------------|-------|----------|----------|
| | | | | Scholarship | | Increase | |
| | No. | Scholarship | | Before | After | Average | Per cent |
| Financial | 303 | 1.224 | 249 | 0.921 | 1.241 | 0.320 | 34.7 |
| Illness | 46 | 1.280 | 104 | 0.877 | 1.191 | 0.314 | 35.8 |
| Scholarship dropped | 3 | 0.700 | 90 | 0.005 | 0.655 | 0.650 | 13,000.0 |
| Loss of interest— discouraged ..... | ... | .... | 22 | 0.560 | 1.099 | 0.539 | 96.2 |
| Age | 36 | 1.323 | 1 | 0.317 | 1.106 | 0.789 | 248.9 |
| Reason not given..... | 26 | 0.921 | 13 | 0.442 | 0.832 | 0.390 | 88.2 |
| Attend another school.... | 19 | 1.019 | 5 | 0.335 | 1.070 | 0.735 | 219.4 |
| Enter in September..... | 81 | 1.288 | ... | .... | .... | .... | .... |
| Curriculum and program difficulty | 1 | 0.880 | 38 | 0.809 | 0.917 | 0.108 | 13.3 |
| Needed at home—illness, etc. | 17 | 1.198 | 29 | 0.976 | 1.304 | 0.328 | 33.6 |
| Lack of objective..... | 60 | 1.114 | 12 | 1.010 | 1.338 | 0.328 | 32.5 |
| Entrance deficiencies | 20 | 0.792 | ... | .... | .... | .... | .... |
| Travel | 11 | 0.809 | 12 | 1.123 | 1.345 | 0.222 | 19.7 |
| Experience | 36 | 1.047 | 25 | 0.972 | 1.329 | 0.357 | 36.7 |
| Did not intend to enter.... | 48 | 1.158 | ... | .... | .... | .... | .... |
| Totals | 707 | | 600 | | | | |

TABLE IX
COMPARISON OF SCHOLARSHIP BEFORE AND AFTER INTERRUPTIONS
TO THE COURSE OF STUDY RELATED TO THE TYPE OF
EMPLOYMENT DURING INTERIM

| Type of Employment | Following High School | | No. | During College Course | | | |
|--|-----------------------|-------------|-----|-----------------------|-------|----------|----------|
| | | | | Scholarship | | Increase | |
| | No. | Scholarship | | Before | After | Average | Per cent |
| Unskilled labor | 38 | 1.183 | 31 | 0.612 | 0.864 | 0.252 | 41.2 |
| Farm labor | 39 | 1.382 | 22 | 0.797 | 1.207 | 0.410 | 51.4 |
| Semi-skilled labor | 94 | 1.148 | 82 | 0.652 | 1.008 | 0.356 | 54.6 |
| Clerical | 196 | 1.260 | 104 | 0.832 | 1.197 | 0.365 | 43.9 |
| Skilled labor | 44 | 1.178 | 73 | 0.648 | 1.141 | 0.493 | 76.1 |
| Clerking, etc. | 77 | 1.094 | 92 | 0.764 | 1.068 | 0.304 | 39.8 |
| Teaching and other pro- fessional | 50 | 1.247 | 30 | 1.027 | 1.263 | 0.236 | 23.0 |
| Managerial | 10 | 0.838 | 22 | 0.909 | 1.324 | 0.415 | 45.7 |
| Total | 548 | | 456 | | | | |

TABLE X
COMPARISON OF SCHOLARSHIP AND RELATION OF EMPLOYMENT DURING
INTERRUPTION TO THE STUDENTS' OBJECTIVE

| | Related Occupation | Unrelated Occupation |
|--|-----------------------|-------------------------|
| Interruption between high school and college | | |
| Number | 175 | 379 |
| Scholarship | 1.249 | 1.179 |
| Interruption during college course | | |
| Number | 160 | 312 |
| Scholarship—Before | 0.767 | 0.754 |
| Scholarship—After | 1.166 | 1.081 |
| Increase | 0.399 | 0.327 |
| Per cent of increase | 52.0 | 43.4 |