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A DESCRIPTION AND AN EVALUATION OF THE ADMISSIONS  
POLICY AT UTAH STATE UNIVERSITY AS IT RELATES  
TO LOW PERFORMING STUDENTS

by

Vincent Eugene Erickson

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

UTAH STATE UNIVERSITY  
Logan, Utah

1964

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*Vincent E. Erickson*  
Vincent E. Erickson

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## INTRODUCTION

It has been evidenced by the increased amount of contacts being made in the Counseling Services of Utah State University that students have been very much concerned about whether or not they should be in college. The discussion concerning which college to attend has been heard often among high school graduates, and for many, Utah State University has been a first choice. An increased drop-out rate among students has been found in the past few years. This study has been accomplished to determine which of the entering students at Utah State have been sufficiently prepared to enter into a course of study on a full time basis. The many drop-outs have been an indication that many have not been prepared for collegiate work at this institution. If this has been the case, it is properly in order that some studying and reviewing be done in connection with the entrance requirements of the University.

This study was concerned with those students, who had low academic high school records and were still allowed admittance to the University. Along with finding some evidence as to the performance of these students in college, the evolution of the admissions requirements and policies of the University was studied with the present standards of foremost importance and interest.

The study was begun during the school year of 1960-61 at Utah State University. The impetus for research of a local nature came from the Academic Standards Committee of the University. In order to select a group of students whose complete college performance could be measured and still remain as current as possible, the entering freshmen of the Fall Quarters of 1956 and 1957 were chosen for study. From this group, those students who were unsuccessful in high school were picked so as to determine the overall performance of the students whose admittance was precarious or who were suspected to be unsuccessful in college. This was expected to represent a typical group of low-performing high school students who went to college.

In the evaluation the following hypotheses were tested: (a) Those students who were not successful (had a grade point average below 2.0) in high school are usually unsuccessful in college. (b) There is a positive relationship between high school grade point average and length of stay in college.

At the outset of the study the following problems were listed to determine the strength of the hypotheses made: (a) The number of entering freshmen who had high school grade point averages below 2.0, (b) The overall cumulative grade point averages of such students in college, (c) The grade point averages in courses related to selected major fields, (d) The grade point averages of the students in Basic Communications courses, (e) Their grade point averages in courses designed to fill the varied group requirements necessary for

graduation, (f) The number of quarters each person attended college, (g) The best single factor for predicting the college success of students, and (h) The ways in which this group differed significantly from a control group.

Also a complete survey of the admissions policies of the University was made. This was done to indicate the progress of the University in improving its entrance requirements, and to show the situation that entering students face today. This was correlated with the statistical analysis in an attempt to supply recommendations that would help the Academic Standards Committee set policy for low performing students who desired to enter college.



## DELIMITATIONS

Due to the many facets of possible research in this type of study, it was necessary to set forth limitations to prevent the study from becoming too broad and general. Therefore, the following areas were not covered:

- (1) Entering freshmen in years other than 1956-57 and 1957-58.
- (2) The attendance of 1956-57 and 1957-58 freshmen beyond the Winter Quarter of 1960-61.
- (3) Transfer students to and from Utah State.
- (4) Foreign students, correspondence students, special students, etc.
- (5) The reasons for dropping out of school.
- (6) Entrance examination scores (due to insufficient data available).

## DEFINITION AND ABBREVIATION OF TERMS

The following term and abbreviations are used frequently in this study and are, therefore, explained briefly below:

(1) Drop-outs - Students who officially withdrew from Utah State University.

(2) UHSS - Unsuccessful High School Students. These were the students who had grade point averages below 2.0 or "C" in high school. These constituted the experimental group.

(3) SHSS - Successful High School Students. The students who were used as a control group, and who had high school averages above 2.0.

(4) GPA - Grade Point Average.

## REVIEW OF LITERATURE

The admissions requirements for entrance to Utah State Agriculture College, which later became Utah State University, were studied and reviewed as they were found in the catalogs of the University since 1891. A description follows which attempts to show the development and progress of the admissions policy at this school. Many of the successive catalogs had identical requirements. The main changes will be shown and the years in which these changes took place.

In the USAC catalogs for the years 1891 through 1894 the following was written:

Examinations for admission to the full College Courses will cover Arithmetic to Percentage, the Elements of Grammar, Geography, and the elementary branches taught in our common schools.

To enter the Preparatory Department students will have to pass Arithmetic to fractions on the plan of Harpers Second Book and in simple sentences in Grammar.

Students passing in the preparatory Department of this College will be admitted to the College Courses without further examination. (48, p. 54-55)

The requirements for admission during the years of 1895 through 1900 remained nearly the same.

Graduates of the Eighth grade of the district schools are permitted to enter the Sub-Freshman year without examination. To enter the Freshman year the student cannot be under fifteen years of age, and must pass a satisfactory examination in the following subjects, using the texts named

or their equivalents: (1) Reading and Spelling, (2) Geography - Appleton's Higher, (3) Either Physical Geography - Maury's or Houston's, or United States History - Barnes, (4) Grammar - Maxwell's Higher, and (5) Arithmetic - Harper's Second Book.

Students may be admitted without examination from an accredited high school, academy or other institution, if they present certificates of the completion of the subjects named above. (48, p. 16-17)

During the years of 1901 through 1909, a few minor changes were made:

Candidates for admission to the Preparatory Courses, and to the Manual Training Courses in Domestic Arts and Mechanical Arts, must be at least sixteen years of age; to all other courses, fifteen.

Graduates of the district school, and those who have completed the Preparatory Course of the College, are admitted without examination to the Engineering Preparatory Course, and to any of the three year courses in Agriculture, Domestic Arts and Commerce.

Other students are admitted to any of the courses leading to degrees, either upon the certificate of accredited schools or upon satisfactory examination in the subjects of the Engineering Preparatory Course. (48, p. 30)

The catalogs for the years 1910 through 1913 were not available at the University Library. The catalog for the school year 1914-15 stated:

Students entering the College Courses must show credits for four years' work in some reputable high school or present fourteen units of approved, accredited high school studies, subject to examination, for entrance to the freshman class. (48, p. 23)

Also missing from the Library was information about the school years 1915-16, 1916-17, and 1917-18. It was assumed that the requirements were approximately the same because in

the catalogs for the years 1918 through 1925 about the same criteria were listed for admission with a short addition thereto:

Students must present fifteen units of approved studies. And, in addition, students who enter with more than one-and-one-half units of high school deficiency must register in the vocational courses. (48, p. 39)

Through the years 1925 to 1945 the following constituted the main part of the admissions policy at Utah State:

Entrance to the freshman class is based upon a certificate of graduation from an accredited high school or upon the presentation of fifteen approved high school units of work, or upon examination in case of students of special training not obtained in high school. Prospective students are strongly urged to send a record of their credits to the Registrar at least two weeks before the opening of school. Students who expect to become candidates for the Bachelor's Degree from any of the schools of the College must include the following prescribed units among those presented for entrance: (1) English - three units, (2) Algebra - one unit, (3) Geometry (or equivalent Mathematics) - one unit, (4) Social Science - one unit, and (5) Natural Science - one unit.

Students may not receive more than Sophomore standing until such conditions are met.

For purpose of educational guidance, all college students entering the institution for the first time may take the intelligence test.

A student who has less than fifteen units of high school work cannot enter unless he is nineteen years of age, in which case he must register for vocational work. (48, p. 53-54)

For the school year of 1942-43, the requirement for one high school unit in Modern Language was added to the requirements above, and the total number of units necessary was raised to ten which had to be included in the five groups mentioned. Then in 1943-44, the same as above was listed

except that those students, who had completed fourteen units of work in high school and were seniors, were allowed to enter college for one year. Upon completion they were to receive a high school graduation diploma and credit for one year of work in college. The purpose of this was to accelerate the training program and speed up preparation for effective war service.

In 1945 there was a major change made in the policy of the college. The change was made mostly for the benefit of those men and women who had served in the Armed Forces. Following is a complete account of the admissions policy for that year and those following up to and including 1956.

Anyone who has served in the Armed Forces is eligible to enter the Utah State Agriculture College, (1) as graduate of high school, (2) by submitting fifteen units of high school credit, or (3) by entrance examination.

Entrance by examination will be based upon two types of tests developed by the United States Armed Forces Institute or other comparable tests approved and recommended by the American Council on Education. First, the tests of general educational development which are designed to measure the extent to which all of the educational experiences of the applicant for admission have contributed to his ability to carry on in a program of general education, or to his educational development of the type which might otherwise have resulted from attendance in a regular academic high school. Second, Subject Examinations: Each of these subject examinations may be used to determine whether the achievement of the applicant for admission is the equivalent of that expected of regular high school students for satisfactory completion of a corresponding course of classroom instruction.

Students who do not otherwise meet the entrance requirements will be required to take the General Achievement Test at the time of entrance. A person

who fails this test because of extenuating circumstances prevailing at the moment may upon the recommendation of the examiner be admitted on a conditional basis and permitted to take an alternative test sometime during the first quarter and, thereby establish college standing as of the date of original entry.

Students who expect to become candidates for any degree or diploma from any of the schools of the college must include among the units presented those preparatory courses which are specified as prerequisite to the beginning college courses in the various fields... Students who do not fit the regular college entrance requirements and who are interested only in a Terminal Certificate, may enter as Vocational Students in which case the entrance requirements are as follows: (a) Applicant must be at least sixteen years of age, (b) Applicant must present a recommendation for entrance from the principal of the high school, (c) Applicant must present satisfactory evidence of his ability to successfully complete the proposed program of study. (48, p. 44-46)

In 1957 new measures were taken to improve the policy.

The Standard minimum requirement for admission to any college of the University is graduation from any approved high school in the United States or equivalent training in a country whose educational systems differ from that in the United States. Some colleges of the University, however, have special requirements for admission.

Examinations: Such Examinations as College Board Entrance Examination, Scholastic College Aptitude Test, or other approved standardized tests which provide appropriate appraisal of scholastic abilities of the applicant shall be accepted for fulfilling this requirement. (49, p. 11)

The policy of 1959 and 1960 was the same as above with this provision added:

Those students who graduate from high schools outside Utah may be denied admission if their credentials do not show a grade point average of 2.00 or better for all academic high school work completed.

Admission to the University does not imply permission to register for any course for which you have insufficient preparation. Deans and department heads may require prerequisites for certain courses. (49, p. 12)

The requirements for admission to Utah State University for the school year of 1960-61 were the same as for the years 1957 through 1959 plus making provisions for low scholarship students. This was stated in the following caption:

Students who have been admitted by the University but who do not have permission to enter one of the professional college or specialized departments may, with the approval of the Academic Standards Committee, enroll in the General Registration Unit of the Counseling Service. (49, p. 12-13)

In the current literature concerning admissions policies varying systems and philosophies were found. In 1956 it was clear to John D. Russell that college enrollment would increase in the future. He wrote:

Barring some major catastrophe that would change markedly the pattern of life in the United States, it would seem reasonable to expect that the percentage of young people who attend college will continue to increase. Some estimates that have been made recently indicate that in the next fifteen years college enrollments will reach a level of 40 or possibly even 50 percent of the population of college age. (44, p. 154)

Then he interjected this thought:

The question is often raised as to whether so large a percentage of the population has the intellectual ability to profit by college-level education. Certainly an attempt to give higher education to young people who do not have proper ability would only result in personal frustration and a waste of social resources. Careful studies have been made ... to discover the characteristics of the high school graduates who do not go on to college. Practically every such an investigation reports that about half of the superior high school graduates do not go on to college. (44, p. 154)



Then he concluded:

...present college enrollments could be doubled without decreasing the average intellectual level of the studentbody. (44, p. 154)

Peterson reported on the current developments in college admissions policies:

Changing criteria for admission can be noted in the trend by admissions officers to place more importance on personal qualification. Rank in class is still significant in the realm of admissions; however, the trend is to supplement it, increasingly, with additional information which may well be on broader grounds than the academic or intellectual. Ability without achievement often fails as the 'open sesame' to college.

Increasing use of tests as bases for admission is noted country-wide. Many colleges are requiring not only the Scholastic Aptitude Test sponsored by the College Entrance Examination Board but achievement tests as well. (40, p. 77)

Melchoir reported:

The most significant current development in college admissions policies is the continued raising of standards of admission. Many colleges who have been able to admit all qualified applicants are finding that they must now practice some selection among their candidates. The most selective institutions are having to reject well-qualified candidates. (35, p. 176-177)

Ohio State University's board of trustees approved in the Fall of 1960 a new admissions policy affecting freshmen who ranked academically in the lowest third of their high school classes. The new policy permitted them to enter the university in the summer, winter or spring quarters - but not in the autumn...(39).

In its Junior College, Boston University sought to provide educational opportunities for the so-called marginal student by means of a two-year college level program

specifically designed to meet the needs of such students. Students not qualified on the basis of the traditional admissions criteria for direct admission to the four-year colleges of the university were given opportunity to prove their ability during two years with the prospect of them being admitted with advanced standing to the program to which they were originally denied admission. The college devised a unique system consisting of teams of instructors, a council of coordinators representing faculty teams, a review board of experienced academic-administrative personnel who actually made the decisions on student transfers, and an appeal board to which students denied transfer could be referred (31). There were no empirical data given.

Fite added his opinion in one of his articles by writing:

It seems to me that every individual should have the freedom to flunk. There are many instances of outstanding men who have made admirable contributions to mankind who were regarded as incompetent, or incorrectly evaluated as lacking ability. Perhaps it is better to have tried and failed than not to have tried, or to have been denied an opportunity for trial. (17, p. 83-84)

The accusation that high school graduates in general and entering college freshmen in particular were drifting through high school by engaging in soft, non-intellectual programs was answered by Lerch (33) in a study published in the December 1959 edition of Clearing House. He found that, among the male applicants for freshman status to the University of Illinois in 1927 and 1957, the difference in total units presented by applicants was almost completely attributable to the area of

foreign languages. With this exception, college applicants were taking the academic subjects in slightly greater amounts in 1957 than in the previous generation.

Many studies were done in an attempt to ascertain the best predictor, or group of predictors, of college success. A number of studies will be summarized to show the results concerning the relationship between certain predictors and college success.

Different variables were implemented in prediction studies. Bonner (5) reported in his doctoral dissertation that among twelve predictors; namely, mental maturity, mathematics, English, reading, high school rank, parental education, parental occupation, size of high school, accreditation of high school, total study-hours per week, popularity of students, and extra-curricular activities participation, high school rank had the highest correlation with first quarter college grades. The correlation was 0.60. The study did not show a significant relationship between college grade point average and the following variables: (a) parental education, (b) parental occupation, (c) size of high school, (d) accreditation of high school, (e) total study-hours per week, and (f) popularity of students.

In an attempt to identify factors that were statistically related to failure among university freshmen, Marsh (34) selected nine factors for study. They were: (a) long commuting time, (b) education of parents, (c) College Board Verbal scores, (d) Armed Services experience, (e) participation in

reading improvement program, (f) high school rank, (g) a fifth year of secondary school training, (h) regular employment, and (i) participation in extra-curricular activities. In his findings he reported statistically significant differences between the failure group and the entire freshman class sample in regard to factors of high school rank and College Board Verbal scores. Most of the other variables proved, in this study, to be unrelated to failure. He stated that the best predictors of college success; i.e., high school rank and scores on standardized achievement or aptitude tests, predicted freshman failure with an accuracy of 70 percent.

Williams (51) tried to isolate factors that would identify potential non-graduates in the academic program at Olympia Community College, a public junior college at Bremerton, Washington. The non-graduation characteristics thus established were: (a) high school grade point average below 2.00, (b) any "F" grades in high school academic subjects, and (c) junior college grade point average below 2.00. The best four predictors were, in descending order, (a) no activities in junior college, (b) one year or less between schools, (c) below 2.00 grade point average in junior college, and (d) below 2.00 grade point average in high school.

A significant finding was made by Swensen (47) in a study of 300 freshman students in the College of Arts and Sciences at the University of Pittsburg from 1946 to 1948. His sample was grouped as Group A, those students who graduated in the upper two-fifths of their high school class;

Group B, those students who graduated in the middle one-fifth of their high school class; and Group C, those students who graduated in the lower two-fifths of their high school class. There were no significant differences among the groups in the subjects pursued in college. In conclusion he stated that students from the highest two-fifths of their high school graduating classes appeared to obtain higher grade point averages in college course work than students from the lower three-fifths, and that for a given score on the American Council on Education Psychological Examination (ACE), a student from the highest two-fifths would probably obtain a higher grade point average than a student from the lowest three-fifths who obtained an equivalent ACE score.

Charles (12) compared average college grades earned by those students who graduated in the top quarter of their high school graduating class with those who were in the lowest quarter. He reported an average college grade point average of 83.95 for the top quarter students and of 78.05 for the lowest quarter students with 70-80 as "C" grade and 80-90 as "B" grade.

Berdie presented a problem, however, in one of his writings. He stated:

Perhaps most consistently used is the student's previous record, and we have much evidence that indicates nothing will predict how a student will do in the future as well as how he has done in the past. At the college level, however, it is becoming increasingly difficult to obtain accurate pictures of how well a student did in the past, as shown by school grades. Selection on the basis of previous grades alone has

many hazards and perhaps is practical only when the person doing the selecting is very well acquainted with the schools from which his applicant comes. (4, p. 485)

As a further indication of the appropriateness to use high school grades as a predictor, Johnson (26) reported in his follow-up study of 601 high ability high school graduates that 81 percent were attending a four-year college or university the year following high school graduation. In a further follow-up of the college achievements of graduates who ranked in the top 15 percent of their high school class, he found that 93 percent earned grades of "C" or better, while nearly 50 percent earned grades of "B" or better.

In a group of probationary students and a control group of superior students, Jones (27) reported that the area of greatest difference was in the quality of high school work. It was impossible to match superior with inferior in this area. Capable students of about the same ability on tests as the probationary group excelled in consistency with their efforts all through high school. Holding aptitude test scores, language background and occupation of parents constant, it was found that 12 percent of the probates and 55 percent of the Superior Controls were in the top fifth of their high school classes, and in the bottom two-fifths 31 percent of the Probates and none of the Superior Controls were found.

Edminston and Rhoades (15) showed in a study that of 75 students who were predicted to make less than the required 2.00 average only one student achieved more (2.08) and one

achieved exactly a 2.00 average. Some of the correlations were: (a) .66 between high school grade point average and the California Achievement Test, (b) .56 between high school grade point average and Language scores on the California Test of Mental Maturity, and (c) .55 between high school grade point average and an Achievement Ratio.

Sopchak (46) obtained correlations between college quality points achieved and scores on certain psychological tests. The intercorrelations between high school grades and the California and ACE tests were substantial; those between high school grades and Rorshach variables were quite low. However, the conclusion was made that high school average was more highly correlated with quality points than any psychological test.

There were several other studies made which revealed the fact repeatedly that high school grades are the best single predictor of college achievement. Franz (18) found that the correlation between high school grades and college grade point average was .67. This correlation was increased to .77 in a multiple regression equation with high school grade point average in academic subjects, Verbal scores on the College Entrance Examination Board Scholastic Achievement Test (SAT) and Mathematical scores on the SAT as variables. A correlation of .76 was found by Fisher (16) in a multiple correlation with a combination of variables consisting of rank in high school, Cooperative English Test, and Essential High School Content Battery with first year college marks as the

criterion. Brice (8) compared twelfth grade averages with college averages and found a correlation of .41. The other predictive factors that he used bore so negligible a relationship to college academic success to merit no further consideration in the study. These were: (a) the Otis Intelligence Quotient, and (b) the ACE Quantitative, Language and Total scores.

Robert Abelson (1) analyzed data which came about as by-products of validity studies carried out by the Educational Testing Service at various co-educational colleges. The correlations between high school grade point average and college grade point average ranged from .30 to .65. The multiple correlations using ACE Language scores, ACE Quantitative scores and high school average as predictors combined raised the range of correlation to from .47 to .74.

Garrett (20) reported that, among all the factors contributing to prediction of scholastic success in college, the student's average grades in high school continued to show the highest correlation with later college scholarship averages. The tendency was all the more convincing when the coefficients of correlation continued high in spite of variations in weightings used to reduce high school grades to comparable averages. In his conclusions Garrett stated that the five factors which had the greatest predictive value and their average coefficients of correlation with average college grades were: (a) high school grades - .67, (b) General Achievement Test scores - .49, (c) Intelligence Test scores - .47, (d) General College Aptitude Test scores - .43, and (e) Special



Aptitude Test scores - .41. Grades in non-academic subjects apparently had as much predictive value as did grades in the academic subjects. The pattern of high school subjects taken had little or no relationship between size of high school and probable college success.

Others who have contributed to the field of research in this area are Akamine (2), Brimm (9), Kern (28), and Kramer (30).

Studies were also conducted which involved not only high school records but also scores on different tests used as criteria for admission to college. Boyer (7), for example, combined the ACE test and the Ohio Psychological Test with high school rank to predict college success. He found the correlations between each variable and college grades. The highest correlation was between high school rank and college grades which was .77, while the correlation between the ACE test scores and college marks was .53, and between the Ohio Psychological Test and college grades was .68.

Klugh and Bierley (29) compared the results of the School and College Ability Test (SCAT) and high school grades with college grades. The SCAT seemed to predict equally well as high school grades. However, the two measures combined produced higher correlations in every case.

Rosenberg (42) used the ACE Language scores and the Complex Task Test scores along with high school grades and found a multiple correlation of .588 between these variables and college success at Bradley University. It was pointed out

that the Complex Task Test as a single predictor did not permit prediction of scholastic achievement at an acceptable level of accuracy for this sample. A multiple regression analysis involving high school rank, ACE Language scores, and Complex Task Test scores permitted the prediction of scholastic achievement with a fair degree of accuracy for this sample. And, yet, high school rank was the best single predictor of scholastic achievement and was largely responsible for the level of prediction achieved by the multiple regression analysis.

Hills (25) and his associates found that three predictors, namely, (a) College Board Scholastic Aptitude Test (SAT), (b) SAT Verbal, (c) SAT Mathematics, and (d) high school average produced an average multiple correlation in the .60's. Of the three predictors high school average was slightly better than either of the SAT scores. Thirty-nine percent of the students who entered the University System in Georgia as freshmen withdrew by the beginning of the Sophomore year. Of these, 25 percent or more dropped out for scholastic reasons. Students who withdrew for scholastic reasons tended to be the students whose College Board scores and high school records indicated that they would be expected to make less than a "C" average during the first year.

Chapman (11) used ten predictive variables for the same purpose and concluded that of those ten variables only five of them were useful. They were: (a) the ACE Quantitative, (b) ACE Language, (c) Cooperative English Mechanics of

Expression, (d) Iowa Silent Reading Test, and (e) high school grades. Of these five, high school grades continued to be the best single predictor of scholastic achievement at the college freshman level.

Baker (3) added a correlation of .57 between high school grade point average and English IA at the college level. H. L. Henderson (23), Henderson and Masten (24), Boyd (6), Hardaway (22), and Weeks (50) did similar studies and most generally came up with essentially the same results.

Another field of study in which much research was done was that of student attrition. The drop-out problem was of major concern to many educators and most school systems. There were varying opinions as to how the people should have been handled who were potential drop-outs, and much consideration was given to the controversial issue which prevailed; namely, should those students who appeared to be potential drop-outs be allowed to enter college? For example, Chambers wrote:

Let each become all that he is capable of being. The large number of college student failures and drop-outs belies this hopeful philosophy. Approximately one-half of the young men and women who register as candidates for college degrees each Fall do not complete requirements for degrees. The shameful loss of human resources and attendant financial expense are enormous . . . A student who fails to qualify at the end of the first college term should be given an opportunity to prepare for readmission at a subsequent date. (10, p. 250,251, 253)

Shuman added:

. . . It seems evident that a considerable number of those who drop out might, with proper pre-college

guidance, discover that their abilities better qualify for some other pursuits. Had they made this discovery early enough they might have saved themselves a great deal of time and expense, and more important than that they might have spent a year happily succeeding at something for which they were fitted rather than grimly failing at a task for which they were ill-fitted.

In fairness to the potential student and to the school, it would seem logical to make more stringent the entrance requirements. Secondly, it has been found effective to present sub-freshman, non-credit courses, perhaps in the form of an orientation program as is found at many schools.

A breakdown shows that among 1547 students investigated at the School of Education, University of Minnesota, 36.8 percent left during the freshman year, 13.2 percent during the sophomore year, 7.4 percent during the junior year, and 4.4 percent during the senior year. (45, p. 348-349)

Yoshino (52) found that there was a significant difference in the high school grade point average and ACE scores between students who dropped out and those who continued their studies in college. On the other hand, there were socio-economic and motivational factors that were taken into consideration in accounting for the success or failure of any given student. Another conclusion made by Yoshino was that even though a number of students dropped out of college at the end of the first year they felt they had derived some educational and social benefits from the experience. The believed that they profited personally and that they would be better citizens.

Paul Munger (36) did a study in 1954 which consisted of 891 General Division students who entered college in 1945-46

to 1948-49, and who graduated in the lower third of their respective high school classes. They were placed in nine persistence groups according to length of stay in college. The variables involved were: (a) scores on the Ohio State Psychological Examination, (b) scores on the Nelson-Denny Reading Test, (c) scores on the Bell Student Adjustment Inventory, (d) scores on Wrenn's Study-Habits Inventory, and (e) grade point average for the first semester in college in English, History, Mathematics, Social Science and Science. The findings showed a general progression of first semester mean grade point average from Persistence Group 1 to Persistence Group G (Graduate). No significant relationship was found between persistence in college of students who graduated in the lower third of their high school classes and the means of scores on the Ohio State Psychological Examination, the Nelson-Denny Reading Test, Bell's Adjustment Inventory and Wrenn's Study-Habits Inventory. This indicated that such psychological tests were of little value in indicating which lower third high school graduates were promising. Yet nine percent of the 891 students were able to graduate. Significant relationships were observed between persistence in college and the mean grade point average for the first semester and mean grades in first courses in English, Mathematics, Social Science, and Science. Therefore, it was possible to use early college grades as predictors of future graduation.

In a report in 1956, Munger (37) reported the same findings and added that the level of aspiration was a strong

factor in the dissimilarity between student persistence. Students who did not achieve grades which were near what they expected as a carry-over from secondary school were apt to drop out of college. Still a third study was reported by Munger and Goeckerman (38) in which the same results were shown. It was mentioned therein that the Ohio State Psychological Examination, as a scholastic aptitude test, had no significant relationship with persistence in college but there was a significant relationship between persistence and the first quarter grade point average.

Powers (41) studied 2,326 freshman drop-outs at the University of Minnesota in 1946, 1947, and 1950. The group included a number of very able students; however, the typical drop-out came from the lower ability bracket in the total university population. This group ranked much lower on the ACE and the Cooperative English Test. The group scored at the 48th percentile on the ACE and at the 35th percentile in the English Test, ranking significantly below the median for entering freshmen. Slightly more than half of the women and 25 percent of the men drop-outs earned a "Passing" grade average during their stay on the campus. The final suggestion was made for the adoption of a progressively tighter selective program.

Halladay (21) made a study with the purpose of summarizing the findings of student mortality in Arkansas colleges and to investigate factors related to the reasons for such drop-outs. The results showed that the largest number of

drop-outs occurred after the end of the first academic year. There were several crucial periods during the school year, however, in which the students were prone to withdraw. These periods occurred in September, November, and after completion of the first semester. Thirty-six percent of all drop-outs were earning a passing grade at the time they left school, while 64 percent of the drop-outs were not passing or did not complete one semester of work. An analysis by Halladay of scores of freshman drop-outs on an ability test indicated that 64 percent of the drop-outs scored below the national median. Another analysis by Halladay of scores of freshman drop-outs on an English achievement test indicated that 74 percent scored below the national median. Approximately three out of five drop-outs scored in the lowest quartile. An analysis of the age range of the drop-out students indicated that 63 percent were nineteen years or younger.

Lehr (32) made a statistical comparison of 343 non-drop-out students and 174 drop-out students at Northwestern State College. The following constituted a summary of the salient findings: (a) The grade point average of the non-drop-out group was significantly higher at the one percent level of confidence than that of the drop-out group, and (b) The English and reading ability of the students included in the study apparently had no appreciable connection with their remaining in or withdrawing from college.

Fults (19) discovered that the greatest number of drop-outs occurred between the end of the freshman year and the

end of the sophomore year. However, there was a high drop-out rate during the second semester of the freshman year. He found that 46 percent of the men and 34 percent of the women in his study graduated from college.

Hardaway (22) studied freshmen who graduated in the bottom 30 percent of their high school classes. In the entering freshman classes during the years 1956, 1957, and 1958 an average of 15.6 percent of the students were in the lowest 30 percent in high school rank. This study was conducted at Indiana State Teachers College where, for a student to be eligible for enrollment in the sophomore year, he must attain a credit-point hour-ratio (GPA) of 1.25 at the close of the freshman year. It was found that, of the original group studied, 44.7 percent withdrew before the end of the first year. Fourteen percent of those had point-hour ratios of 1.00 or better at the time of withdrawal. This was an acceptable mark.

In another study, Dugan (14) concluded that standing in high school graduating class was significantly related to length of stay in higher education.



## PROCEDURE

The first step in investigating a group of students at Utah State University was to find a valid method of selecting such a group. In order to obtain a relatively large sample of students, a group from two freshman classes was selected. The freshman classes of the school years 1956-57 and 1957-58 were selected because they were large classes and sufficient time had elapsed before the study began to allow the members of these two classes ample time to have graduated under normal circumstances, and still be recent enough to be relevant to the time and type of entrance requirements prevalent at the time of the study.

The criterion chosen to select the experimental group was high school grade point average (GPA). A control group was selected randomly by taking every tenth person as they were listed on the official enrollment records as kept by the Office of Admissions and Records. This list did not include those names of persons who were chosen for the experimental group. This constituted the control or successful group. High school GPA's of all entering freshmen who entered the university in the Fall Quarters of 1956 and 1957 were computed. The point system was incorporated in the computations with 4.0 equal to the grade of A, Superior, 90-100 of a possible 100 points, or 4.0 grade point average; 3.0

equal to the grade of B, Excellent, 80-89 of a possible 100 points, or 3.0 grade point average; 2.0 equal to C, Good, 70-79, or 2.0; 1.0 was equal to D, Passing, 60-69, or 1.0; and 0.0 was equal to F, Failure, 59 and below, or 0.0. These were the different means of grading students used by the various high schools from which the students in the study graduated. These grades were found on the high school transcripts of records which were received by the Office of Admissions and Records. All classes taken in high school were included in the GPA's. All those whose GPA's were below 2.0 were included in the unsuccessful or experimental group. Those who withdrew from college during their first quarter without receiving grades for the work completed were included in the comparison of high school grades versus length of stay in college, but not in the remainder of the study. Table 1 shows the number of students in the two groups and the number in the two freshman classes from which they were chosen.

Table 1. Number of students in the Fall Quarter freshman classes of 1956 and 1957, and the number of students selected as unsuccessful high school students (UHSS) and as successful high school students (SHSS - Control Group)

	Freshmen Registering	UHSS		SHSS	
		No.	%	No.	%
Fall 1956	1277	59	4.62	116	9.08
Fall 1957	1269	100	7.88	106	8.35
TOTAL	2546	159	6.21	222	8.72

A card was filled out for each student thus selected giving the following data: Name, address, year of entrance into college, high school GPA, number of quarters attended at Utah State University, whether or not graduated from Utah State, overall cumulative college GPA, GPA in Basic Communications courses, GPA in courses relating to the person's major field (if chosen), and GPA in courses applicable to the several groups that must be filled to graduate, (See Appendix 1). This information was obtained from the students' individual folders in the files of the Office of Admissions and Records. Specifically, the high school transcript which accompanied each person to college and the official college transcripts were used to gather the data.

The data thus obtained were tabulated to show:

- (1) The distribution of high school GPA's of the unsuccessful high school students.
- (2) The length of stay in college by quarters of both groups.
- (3) The cumulative college GPA's of both groups and the number of students successful and unsuccessful. The percentages of the groups were also included.
- (4) The GPA's of both groups in Basic Communications courses and the number and percentages of students unsuccessful and successful.
- (5) The GPA's of both groups in courses related to their major fields of study and the number and percentages of students unsuccessful and successful.

(6) The GPA's of both groups in courses related to group requirements and the number and percentages of students unsuccessful and successful.

(7) Tetrachoric correlations between the two groups comparing high school GPA with each of the four factors mentioned in (2), (3), (4), (5), and (6) above.

The tables, as indicated above, were then prepared and the data analyzed as described in the following section.

## RESULTS

In this section the writer will show the results gleaned from the data collected. Several tables will be shown which will compare the experimental group with the control group in the various variables chosen to determine the college success of unsuccessful high school students. Each table will then be explained and the important points written out and emphasized.

Table 2 shows the distribution of high school grade point averages (GPA) for the 159 Unsuccessful High School Students (UHSS). More than half of the group, 98 or 61.6 percent had high school GPA's of 1.8 or 1.9, using a scale of 4.0 for A, 3.0 for B, 2.0 for C, 1.0 for D, and 0.0 for F. Thirty-six students or 22.6 percent of the group had high school GPA's of 1.6 or 1.7. Twenty-one or 13.2 percent had average GPA's of 1.4 or 1.5. Two students or 1.3 percent had grades of 1.3, and one student had a GPA of 1.1, while the last student had an average of 0.8 in high school.

Table 2. Distribution of high school grades of unsuccessful high school students who entered Utah State University in the Fall Quarters of 1956 and 1957

High School Grades	Number	Percent
1.8 - 1.9	98	61.6
1.6 - 1.7	36	22.6
1.4 - 1.5	21	13.2
1.2 - 1.3	2	1.3
1.0 - 1.1	1	0.7
0.8 - 0.9	1	0.7
TOTAL	159	100.1

In order to determine the amount of attrition among the UHSS and the SHSS, it was determined through study of their transcript of credits how long, by number of quarters, the students remained in college. The following table shows this comparison.

Table 3. The attendance by number of quarters of the unsuccessful and successful high school students\*

Number of Quarters	UHSS Group <sup>a</sup>		SHSS Group <sup>b</sup>	
	No.	%	No.	%
Graduated	11	6.9	50	22.5
15	0	0	1	.5
14	0	0	1	.5
13	0	0	0	0
12	3	1.9	3	1.4
11	4	2.5	4	1.8
10	3	1.9	8	3.6
9	7	4.4	8	3.6
8	4	2.5	9	4.1
7	5	3.1	6	2.7
6	4	2.5	19	8.6
5	13	8.2	8	3.6
4	7	4.4	16	7.2
3	35	22.0	49	22.1
2	19	11.9	11	5.0
1	30	18.9	22	9.9
Withdrew in first quarter	14	8.8	7	3.2
TOTAL	159	99.9	222	99.8

\*Significant beyond one percent level of confidence.

<sup>a</sup>Mean = 4.24

S.D. = 3.83

<sup>b</sup>Mean = 6.80

S.D. = 5.12

Particular attention should be focused on the percentages, because the total number of students in the two groups differed. The third quarter in college was the crucial point when students dropped out of school most often; i.e., they went to school one year and did not return the following Fall. Among the UHSS, 22 percent of the students did not return for the second year. 22.1 percent of the SHSS also did not return after the first year. It should be born in mind that some of the students transferred to other schools. This detail was not followed. However, some of the students' personal folders

revealed this fact. It was found that several of the students who dropped out after two years in college were members of the Church of Jesus Christ of Latter-day Saints, who interrupted their collegiate studies to fulfill missionary calls as was the practice in that church. Most of them returned to school after two years absence while some of them remained away for three years. This study did not cover the period of time when such students graduated. It was noted that a greater percentage of students who left school for this reason was from the SHSS group than from the UHSS group. This was determined by study of the personal folders; however, no empirical facts or figures were gathered. This explanation accounted, in part, for the fact that eight, or 5 percent, of the UHSS group were still attending college during the Spring Quarter of 1961, while 38, or 16.2 percent, of the SHSS group attended Spring Quarter of 1961.

Among the UHSS group, 61.1 percent withdrew from college during the first year. Of the SHSS group, 40.2 percent withdrew during the first year. 6.9 percent of the UHSS group graduated, while 22.5 percent of the SHSS group graduated. It should also be noticed that a student should, under normal circumstances, graduate after attending college for twelve quarters or four years. Within the UHSS group 1.9 percent went to college for twelve quarters or more without graduating, while within the SHSS group there were 2.4 percent of the students in this category. Also of significance was the fact that in the UHSS group 8.8 percent of the students



dropped out before completing one quarter of school work. 3.2 percent of the SHSS group did not finish their first quarter. The average number of quarters attended by students in the UHSS group was 4.24, while the average for the SHSS group was 6.80.

The grades which the students in each group received in college were then compared. A cumulative GPA was calculated which included all college courses taken by each student. The distribution of grades for each group is shown in Table 4. The total number of students in each group in the table differed from the total number of students in previous tables. This resulted from the fact that not all students originally chosen for the study could be applied to all phases of the study. Differences in totals of the two groups will also be found in subsequent tables. An example of the differences encountered can be found by comparing the two groups in Table 4, where 14 students from the UHSS group and 7 students from the SHSS group were not included. These represented the students who, as has already been pointed out, withdrew from school during the first quarter at college, and did not compile a collegiate academic record.

Table 4. Comparison of the cumulative grade point averages of the UHSS group and the SHSS group\*

Range of College Grades	UHSS Group <sup>a</sup>		SHSS Group <sup>b</sup>	
	No.	%	No.	%
3.6 - 3.9	0	0	9	4.2
3.2 - 3.5	2	1.4	32	14.8
2.8 - 3.1	2	1.4	40	18.6
2.4 - 2.7	12	8.3	47	21.9
2.0 - 2.3	21	14.6	33	15.4
1.6 - 1.9	39	26.9	31	14.4
1.2 - 1.5	29	20.0	11	5.1
0.8 - 1.1	20	13.8	10	4.7
0.4 - 0.7	10	6.9	2	.9
0.0 - 0.3	10	6.9	0	0
TOTAL	145	100.2	215	100.0

\* Significant beyond one percent level of confidence.

<sup>a</sup> Mean = 1.53

S.D. = .69

<sup>b</sup> Mean = 2.46

S.D. = .72

Of significance in the above table, as in later ones to be shown, is the percentages of students in the two groups who were unsuccessful in college. In the UHSS group 74.5 percent of the students had cumulative GPA's below 2.0 and would, therefore, be considered unsuccessful in college. Within the SHSS group, 25.1 percent were unsuccessful in college. It was obvious that, with a difference of this size, the T-test of 2.85 was significant beyond the one percent level of confidence. An examination of the graduation requirements for

1961 revealed that a GPA of 2.0 in at least 150 quarters hours was the minimum for graduation. This indicated that the average UHSS whose GPA was 1.53 could not have graduated from college. The SHSS had an average GPA of 2.46 which made the average student in this group eligible for graduation.

Table 5 presents a similar comparison of the two groups in their success in the Basic Communications courses which they were required to take. However, for some reason not known to the writer, 25 students; 15.7 percent, in the UHSS group and 13 students, 5.9 percent, in the SHSS group did not enroll in Basic Communications courses. Most of the students in this category were those who attended college for only one quarter. In this variable, 64.7 percent of the UHSS group and 20.7 percent of the SHSS group were unsuccessful in their English courses of Basic Communications. That is, they were below 2.0 or the grade of C. The T-test of 8.47 showed a significant difference beyond the one percent level of confidence.

Table 5. Comparison of the Basic Communications grade point averages of the UHSS group and the SHSS group\*

Range of Grades	UHSS Group <sup>a</sup>		SHSS Group <sup>b</sup>	
	No.	%	No.	%
4.0	2	1.4	16	7.7
3.6 - 3.9	2	1.4	15	7.2
3.2 - 3.5	0	0	20	9.6
2.8 - 3.1	6	4.3	46	22.1
2.4 - 2.7	7	5.0	20	9.6
2.0 - 2.3	32	23.0	48	23.1
1.6 - 1.9	14	10.1	10	4.8
1.2 - 1.5	18	12.9	8	3.8
0.8 - 1.1	22	15.8	9	4.3
0.4 - 0.7	6	4.3	5	2.4
0.0 - 0.3	30	21.6	11	5.3
TOTAL	139	99.8	208	99.9

\*Significant beyond the one percent level of confidence

<sup>a</sup>Mean = 1.42

S.D. = .95

<sup>b</sup>Mean = 2.50

S.D. = 1.01

The students' major field of study was the next point of interest in determining their success in college. Many students, who remained in college for a short while did not choose a major. The UHSS group had 19.5 percent of the students who did not choose a major. The SHSS group had 15.3 percent who did not choose a major, which is not largely different from the UHSS group. However, a definite difference in success was shown between the groups in the major fields

of study which they chose. In the UHSS group 56.3 percent of the students were unsuccessful in their major fields of study. 23.9 percent of the students in the SHSS group were unsuccessful. The mean GPA for the UHSS group was 1.27 and for the SHSS group 2.46, a difference which was significant beyond the one percent level of confidence. Table 6 shows the distribution of GPA's of the two groups in courses relating to their major fields of study.

Table 6. Difference in grade point averages and percentages of the UHSS group and the SHSS group in courses related to their major fields of study\*

Range of Grades	UHSS Group <sup>a</sup>		SHSS Group <sup>b</sup>	
	No.	%	No.	%
4.0	0	0	3	1.6
3.6 - 3.9	0	0	12	6.4
3.2 - 3.5	4	3.1	32	17.0
2.8 - 3.1	5	3.9	30	16.0
2.4 - 2.7	16	12.5	33	17.6
2.0 - 2.3	31	24.2	33	17.6
1.6 - 1.9	23	18.0	22	11.7
1.2 - 1.5	14	10.9	12	6.4
0.8 - 1.1	13	10.2	7	3.7
0.4 - 0.7	8	6.3	1	.5
0.0 - 0.3	14	10.9	3	1.6
TOTAL	128	100.0	188	100.1

\* Significant beyond the one percent level of confidence

<sup>a</sup> Mean = 1.27 S.D. = .83

<sup>b</sup> Mean = 2.46 S.D. = .79

Table 7. Difference in grade point averages of the UHSS group and the SHSS group in courses related to satisfying group requirements\*

Range of Grades	UHSS Group <sup>a</sup>		SHSS Group <sup>b</sup>	
	No.	%	No.	%
4.0	0	0	1	.5
3.6 - 3.9	0	0	6	2.8
3.2 - 3.5	0	0	20	9.4
2.8 - 3.1	3	2.1	35	16.5
2.4 - 2.7	8	5.7	38	17.9
2.0 - 2.3	23	16.3	54	25.5
1.6 - 1.9	21	14.9	29	13.7
1.2 - 1.5	24	17.0	16	7.5
0.8 - 1.1	29	20.6	7	3.3
0.4 - 0.7	17	12.1	3	1.4
0.0 - 0.3	16	11.3	3	1.4
TOTAL	141	100.0	212	99.9

\* Significant beyond the one percent level of confidence

<sup>a</sup> Mean = 1.33 S.D. = .73

<sup>b</sup> Mean = 2.32 S.D. = .74

Table 7 shows the distribution of grades of both groups in respect to those courses taken to satisfy group requirements which were required to be filled before graduation. This did not mean, however, that all the courses included in this distribution were actually used by the students to fill the various groups. This could not be ascertained by the

writer. Some of the students were in major fields where it was not necessary to fill the group requirements; for example, Engineering and Forestry. However, these students took courses which could be applied to filling groups if the necessity were to arise such as the basic courses in Chemistry and Mathematics. In order to provide a constant criterion on which to base a decision as to whether or not a particular course could be included in this phase of the study, the list of courses outlined in the Utah State University catalogs for 1956-57 and 1957-58 for filling group requirements were used. The requirements for both years were identical. If a student took more courses than the maximum amount usable in that particular group, only those courses adding up to the maximum quarter-hours were used. (See APPENDIX II)

The total number of students who were used in this part of the study differed from the original number of students chosen for the study. Eighteen students, 11.3 percent, in the UHSS group did not take courses that could be applied to filling groups. In the SHSS group there were 10 students, 4.5 percent, in this category. In the UHSS group 75.9 percent of the students had GPA's below 2.0 or C in courses applicable to group requirements. In the SHSS group there were 27.3 percent of the students below 2.0 in those courses. The mean GPA for the UHSS group was 1.33, while the SHSS group averaged 2.32 in this variable. With such a large difference it naturally followed that a T-test of 2.97 resulted in a significant difference beyond the one percent level of confidence.

Table 8. The degree of success of the UHSS group in four different variables

Variable	Successful in college		Unsuccessful in college		TOTALS	
	No.	%	No.	%	No.	%
College	37	25.7	108	74.5	145	100.2
Basic Comm.	49	35.1	90	64.7	139	99.8
Major Field	56	43.7	72	56.3	128	100.0
Group Req.	34	24.1	107	75.9	141	100.0

Table 9. The degree of success of the SHSS group in four different variables

Variable	Successful in college		Unsuccessful in college		TOTALS	
	No.	%	No.	%	No.	%
College	161	74.9	54	25.1	215	100.0
Basic Comm.	165	79.3	43	20.6	208	99.9
Major Field	143	76.2	45	23.9	188	100.1
Group Req.	154	72.6	58	27.3	212	99.9

Tables 8 and 9 are summaries of the comparisons thus far made in this study. They show how successful and how unsuccessful each group was. On the basis of these results, artificial dichotomies were established for which tetrachoric correlations were computed. One continuous variable, namely high school GPA, was used as one variable and compared with each of the four continuous variables listed in Tables 8 and 9: (a) College GPA, (b) Basic Communications GPA, (c) Major



Field GPA, and (d) Group Requirements GPA. All these variables were considered artificial dichotomies with 2.0 as the point differentiating success from nonsuccess. Table 10 shows the results of this statistical analysis. The tetrachoric correlations were at least as high as most of the cases cited in the review of literature. The tetrachoric correlation between high school GPA and Group Requirements GPA was the highest - .712. Next highest was the comparison between high school GPA and college GPA which was .695. The correlation between high school GPA and Basic Communications was .626, and the comparison showing the lowest correlation was between high school GPA and Major Field GPA - .515.

Table 10. Tetrachoric correlations between various predictor variables and high school GPA

Variable <sup>a</sup>	Number		Tetrachoric Correlation
	UHSS	SHSS	
College GPA	145	215	.695
Basic Comm. GPA	139	208	.626
Major Field GPA	128	188	.515
Group Req. GPA	141	212	.712

<sup>a</sup> All variables were dichotomized at 2.0

## DISCUSSION

As reported in several studies cited in the review of literature, high school grade point average is regarded as the best single predictor of college success. Other variables were used with varying degrees of success with some of them being combined with high school grade point average, but the same result most generally evolved; i.e., that high school grades contributed most to predicting college success. The present study substantiated the previous findings, but did not indicate that this procedure was the ultimate in selecting students for attendance at a university. Only academic standards were considered in the present study. In the review of literature it was shown that academic predictors were much more accurate than non-academic predictors of college success. Nonetheless, non-academic considerations should be taken into account in selecting students for college.

It was noted that Utah State University has become more selective during the past few years. This would indicate that steps are being taken to deny certain students admittance to the University. The University has been stricter on students from other states, while any graduate from a duly accredited Utah high school could enroll. However, the results of this study indicated that many Utah students were

failing or dropping out of school, which meant that some selectivity would be justified among Utah high school graduates, for there was no distinction made between those from Utah and those from other states.

The hypotheses set forth in the introduction of this study were found to be true. Generally, those students who did poorly in high school also did poorly in college. 74.5 percent of those who were unsuccessful in high school were also unsuccessful in college. Their average grade point average in college was 1.53 compared to 2.46 which was achieved by the average successful high school student in college. This indicated that most of the unsuccessful high school students were not acceptable in the various colleges of the University because a student was expected to have a 2.00 grade point average in all college work in order to be eligible for admittance. According to the catalog of 1961, a student must have a minimum grade point average of 2.00 in at least 150 credit hours of collegiate work to be eligible for graduation; i.e., he must have twice as many grade points as credit hours.

Another variable used in the comparison with high school grade point average also bore a significant relationship. The grades students received in Basic Communications courses correlated with high school grade point average. The tetrachoric correlation was .626 indicating that those who did poorly in high school and scored low in the English Cooperative Examination, as did most of the unsuccessful

high school students, also received low grades in English courses in college.

Another point brought out in the study was that those unsuccessful high school students who stayed in college long enough and were well enough prepared to choose a major field of study were inclined to do slightly better in college than those who never chose a major. The comparison between high school grades and grades received in the students' major fields of study produced a lower tetrachoric correlation than other comparisons made.

Although a tetrachoric correlation could not be computed between high school grade point average and length of stay in college, it was noted through comparison of the groups that the unsuccessful high school students did not remain in college as long as the successful high school students. This means that length of stay in college can be predicted as well as grades in various areas in college on the basis of high school grades. One cannot infer that high school grade point average is more indicative of a person graduating than simply remaining in college for several quarters. Many of the successful high school students dropped out after attending one year as did many of the unsuccessful high school students. Therefore, the results of this phase of the study should be interpreted more generally without attempting to be specific in individual cases. But at the same time, high school grade point average should be given serious consideration when attempting to predict success in college.

It is also of importance to note that this study did not deal with specific individuals beyond the point of determining whether or not they were successful in high school and college. The sample was construed to be representative of the general population of students entering college who were not successful in high school with no attempt being made to isolate cases to prove a point of theory. The results of the comparisons made in the study were all significant beyond the one percent level of confidence. It was quite apparent that those students with poor high school records were most likely not to succeed in college. Therefore, it may still be desirable to use high school grades to identify this group and question their admission to college. Further indications might also be found through additional research which might assist in achieving more accurate screening, but at present it is evident from this study that a no better single predictor will be found than a student's high school grade point average.

## SUMMARY

The Academic Standards Committee was concerned about the drop-out rate of students at Utah State University, especially the freshmen. They were also concerned about the many students who were required to be put on probationary status because of low academic grades. It was evidenced by the high drop-out rate and low scholarship attainments of the unsuccessful high school students that many students entered Utah State who were neither prepared nor qualified to enter collegiate study. Of the students not satisfactorily qualified academically to enter college, only seven percent eventually graduated.

This information prompted the Academic Standards Committee to question the existing criteria for selection of entering freshmen. At the time of this study, a person's admission was based on a high school graduation certificate if he resided in Utah. For out-of-state students a minimum grade point average of 2.00 for all academic work in high school was required before admission was given. For those not meeting these requirements, admission could also be granted to enter the University in the General Registration Unit of the Counseling Services. The satisfying of all these requirements, however, did not preclude the possibility of any student being denied permission to register for any course in

the different departments and colleges of the University. But the concern was regarding the students with questionable credentials for admission, and the study dealt with such persons.

The purpose of this study was two-fold: (a) To describe the admissions requirements of Utah State University as they developed through the past years of the school's existence, and (b) to collect data concerning low scholarship students and determine their degree of success in college.

The admissions requirements of the University from as early as possible up to the time of the study were described in order to show the progress that was made and to put the present study in proper perspective. Empirical data were then collected on students as recently and completely as possible to show the problem confronting Utah State with respect to students who desired to enter college but had poor high school academic records.

The sample included all freshmen who entered Utah State in the Fall Quarters of 1956 and 1957, who had high school grade point averages below 2.00 or C. These students were largely from Utah high schools. There were 159 such students in this category. The variable used as a predictor of college success was high school grade point average. The criteria used to evaluate college success were: (a) cumulative college grade point average, (b) length of stay in college as measured by number of quarters attended, (c) grade point average in Basic Communications courses, (d) grade point average in courses related to the students' major field of study, and

(e) grade point average in courses taken to fill group requirements necessary for graduation.

High school grade point averages were computed from the high school transcripts of credits which were sent to the University's admissions officer along with the students' application for admission to the University. Grade point averages in all college courses and groups of courses as enumerated in the above listing of criteria were computed from the students' official transcript of credits as maintained by the Office of Admissions and Records at the University.

The study attempted to determine (a) the effectiveness of a predictor variable, (b) the relationship between that predictor variable and criteria used to evaluate college success, and (c) the length of attendance of low scholarship students in college. After tables were drawn showing the distribution of grades in the various variables, Means and Standard Deviations were computed on each of the variables. Tetrachoric Correlations were then computed between high school grade point average and the different variables, and the statistical comparisons were made and reported in a summary table.

As supported by findings of many studies reported in the review of literature, high school grade point average resulted in predicting college academic success with a high degree of accuracy (Tetrachoric Correlation of .695). However, a higher correlation was found between high school grade point average and grade point average in courses used



to fill group requirements, .712. The relationship between high school grade point average and grade point average in courses related to the students' major field of study was significant, .515, as was the correlation between high school grade point average and grade point average in Basic Communications courses, .626. In comparing the sample with a control group of successful high school students who attended Utah State University during the same period of time, all differences between the groups were significant beyond the one percent level of confidence.

In the research concerning the length of stay in college of low scholarship students, it was found that only 6.9 percent of the experimental sample graduated, 8.8 percent of the group withdrew from college before completing one quarter, and 61.6 percent of the unsuccessful high school students withdrew from school during their first year at Utah State. By the end of two years in college, 76.7 percent of the sample withdrew from school.

## CONCLUSIONS

On the basis of the results of this study, the following conclusions were reached:

(1) The high school grade point average is very effective and accurate in predicting those who may succeed academically in college at Utah State University.

(2) The high school grade point average is also a good predictor of the length of time a student will remain in college. Low scholarship students are most likely to drop out of school sometime during their first year at college.

(3) The average unsuccessful high school student is not able to graduate from college after four years of attendance because of low academic grades.

(4) The variable most accurately predicted by high school grade point average was the students' success in courses which could be used to fill group requirements necessary for graduation from Utah State University.

(5) The second most accurately predicted variable was the students' overall success in college.

(6) There is a need for additional research in this area to identify factors that contribute to the high dropout rate and lack of success among unsuccessful high school students who are allowed admittance to Utah State University.

## RECOMMENDATIONS

As a result of the information gathered and the conclusions reached, the following recommendations are made:

(1) Continuing serious consideration might be given in decisions of admitting students to Utah State University who have low academic high school records, thereby preventing embarrassment and disappointment to many students who are ill-prepared to meet the challenge which college work presents.

(2) If such students are to be admitted they might be given guidance and opportunities commensurate with their displayed performance of the past, which would provide a proving period for them to show their desire and ability. Possible alternate programs which might warrant consideration are:

a. These students might possibly be allowed to enroll in a one-half-load course.

b. They might begin their college work by taking a Basic Communications course and one or two other beginning courses of their choice.

c. Sub-college courses might be offered in various basic fields with no credit given to give these students an opportunity for trial as well as exploration.

(3) In light of the past progress made in the

admissions policies of the University and the apparent problem which faces those responsible for the admissions policies, consideration might be given to provide the standards necessary to maintain a high academic standard at the University, and at the same time, provide opportunities for such students as those under consideration in this present study.

(4) It is recommended that additional research be conducted to identify other factors that may be contributing to the high drop-out rate of students at Utah State University.

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APPENDIX I

Table 11. A replica of the card kept concerning each student on which data for this study were recorded

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Name \_\_\_\_\_ Year of entrance \_\_\_\_\_

Address \_\_\_\_\_

High school grade point average \_\_\_\_\_

Number of quarters attended \_\_\_\_\_

Cumulative college grade point average \_\_\_\_\_

Basic Communications grade point average \_\_\_\_\_

Major field grade point average \_\_\_\_\_

Group Requirements grade point average \_\_\_\_\_

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APPENDIX II

Table 12. Group requirements mandatory for graduation

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Group Requirements - A total of 40 credits must be selected from the following four groups with not less than eight credits nor more than 12 credits being counted in any one group:

- I. Biological Science.
    - A. Biology 1 and either five hours of Lower Division Bacteriology or Physiology 4.
    - B. For more technical courses, any one of the following sequences:
      1. Botany 24 and 25
      2. Zoology 3 and 4
      3. Any two of the following three series:
        - a. Bacteriology 10 or 70, and 71
        - b. Botany 24 or 25
        - c. Zoology 3
  - II. Exact Science.

Chemistry - any course of Lower Division grade.  
Geology - 1 or 3, 4, 5 or Physical Science 31, 32, 33.  
Mathematics - any course of Lower Division grade.  
Physics - any course of Lower Division grade.
  - III. Language and Arts.

Art 1, 2, 3, 4, 22, 26, 32, 33, 36.  
English - any literature course of Lower Division grade.  
Landscape Architecture 3.  
Language - any beginning course in French, German, Portuguese, Spanish, or Latin. (A minimum of 14 credits must be earned in a beginning course before credit is applied toward graduation)  
Music 1, 80, 81, 90.  
Speech - any course of Lower Division grade.
  - IV. Social Science.

Agriculture Economics 53.  
Economics 51, 52.  
History - any course of Lower Division grade.  
Psychology 53.  
Political Science 1, 10, 70.  
Sociology 10, 70.
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