

ABSTRACT OF THESIS

-----

THE EFFECT OF MARRIAGE UPON  
ACADEMIC ACHIEVEMENT

Submitted by  
Courtlyn Hotchkiss

In partial fulfillment of the requirements  
for the Degree of Master of Education  
Colorado

Agricultural and Mechanical College

S-2-01A-09-03-012 Colorado

August, 1948



U18400 9074250

LIBRARY  
COLORADO A. & M. COLLEGE  
FORT COLLINS, COLORADO

378.788

A O

1948

13a

# ABSTRACT

One of the most important changes which took place in colleges and universities with the return of the servicemen was the considerable increase in the number of married students. Statistics released by the American Council on Education, 1948, revealed that almost one third of the veterans enrolled in colleges and universities were married and that 40 per cent of this group had one or more children.

The "G. I. Bill of Rights" enabled married men to attend college "en masse" for the first time in history. Over 300,000 of them were attending colleges and universities during the fall of 1946. [This mass migration not only created considerable confusion on the campuses but also created a new social pattern in institutions of higher education.]

The enrollment of large numbers of married men in colleges was such a unique situation that the attention of the public was soon focused upon it. No sooner had the married students settled into the routine of attending classes than the public began clamoring for statistical reports comparing this group with the single students. The question most commonly heard was, [How does the scholastic work of the married man compare with that of the single man?]

This thesis was not written merely to satisfy the curiosity of the public concerning the above mentioned question. It was written, rather, to determine whether there were any unique factors which affected the academic achievement of this group.

It is hoped that the results of this work will be of value in the guidance of married men who are concerned with the possibilities of attaining a college degree even though they have taken on the responsibilities of family life.

The problem of this study is, What effect does marriage have upon the academic achievement of entering college freshman?

Analysis of the problem.--1. How do the college marks of married freshman students compare with those of single freshman students?

2. What is the difference between the two groups in terms of outside employment while enrolled in college?

3. What is the difference between the two groups in terms of the number of credit hours carried?

4. What is the difference between the two groups in terms of the number of hours spent in study?

5. What is the difference between the two groups in terms of educational objectives to be gained from college attendance?

6. According to the married students, what effect does being married have upon their college work?

In order to provide data concerning the factors affecting the academic achievement of married freshman students in college, an investigation was made of 200 freshman students, half of whom were married, who were enrolled at Colorado Agricultural and Mechanical College during the fall quarter of the 1946-47 school year.

The data were obtained by the use of two methods, which were as follows:

1. An analysis of the records of the college registrar, the college testing bureau, college veteran's affairs office, and the college student affairs office to obtain data relative to the enrollment, college achievement, test scores, military service, and age.

2. The administration of a Personal Interview Form to 154 students of the sample to obtain information pertaining to the selection of educational objectives, employment, time spent in study, and attitudes of married students toward the effect of marriage on their college marks.

#### Data-collecting devices

Data concerning the academic achievement of students constituting the sample obtained from the records in the office of the Registrar included first-quarter achievement in terms of grade-point average, to be referred to as G. P. A.

G. P. A. was obtained by the following method:

Letter grades for the first quarter of college



were weighted so that an "A" equaled 4, a "B" equaled 3, a "C" equaled 2, a "D" equaled 1, and an "F" equaled 0. Courses recorded as "withdrawn failing" were counted as an "F". Courses recorded as "withdrawn passing" were not counted. These weights were multiplied by the number of hours for which a student had registered in each instance.

The resultant figure, which represents the number of quality points, was then divided by the total number of hours for which the individual was enrolled to obtain the G. P. A.

The minimum acceptable G. P. A. that a student must maintain to remain in college beyond his freshman year is 2.0.

Data concerning the following areas were collected by the use of an interview form:

1. Educational objectives.
2. Hours employed.
3. Hours in study.
4. Attitude toward marriage.

The interview form was constructed to secure valid data that were only available through contact with the individuals included in the sample.

A tentative interview form was prepared and administered to a number of students who visited the Office of Veterans Affairs. With their help and the help of several staff members, the interview form was altered so that it was clear and easily completed.

The final draft of the interview form contained seven questions regarding the selection of the educational objective by the student, one question concerning outside employment, one question regarding hours spent in study, and two questions aimed at uncovering married students' attitudes toward marriage as it affected their college marks.

The interview form was administered personally to 124 of the 200 students included in the sample, or 62 per cent. These individuals were enrolled in college at the time of this study and were requested to visit the author in his office. The remaining 76, or 38 per cent, had withdrawn from college and were mailed copies of the interview form along with a personal letter explaining the form and soliciting their cooperation in completing and returning it. Of the 76 copies mailed out, 30 were returned completed and 13 were returned due to incorrect addresses.

Total interview forms administered or completed and returned were 154, or 82.38 per cent.

The interest of the students included in the study was amazing. A majority requested that they be allowed to read the completed manuscript and thanked the author for including them in the sample. The married students seemed to be slightly more interested than the single group.

### Sample

An examination of the records of the Office of Student Affairs revealed that in the fall quarter of the school year 1946-47 there were 254 married students enrolled who were attending college for the first time. It was determined that a sample of 100 should be taken as the experimental group for this study. The married students' names were listed alphabetically and every other name was selected until 100 had been secured.

After selecting the experimental group, the records of the Colorado A & M College Testing Bureau were investigated to secure the percentile test score of the American Council on Education Psychological Examination, to be referred to as the A. C. E., for each married student in the sample. The records of the Office of Veterans Affairs were utilized to determine the ages of these students to their nearest birthday. These records were also checked to make certain that all students in the experimental group were male veterans.

In order to compare the academic achievement of married students with that of single students, it was determined that it would be necessary to select a control group of single students equated to the experimental group according to A.C. E. percentile test scores,

age, sex, and military service.

The records of the Office of Student Affairs revealed that there were 833 single freshman students who had entered college in the fall quarter of the school year 1946-47. Students from this group were matched with married students in the experimental group so that there was no more than two percentile points difference in their A. C. E. test scores nor one years difference in their ages taken at the nearest birthday. Sex and military service were equated, since all of those included in each group were ex-servicemen as indicated by the records of the Office of Veterans Affairs.

#### Statistical procedures

In order to determine the significance of the difference between two statistics,  $t$ , the critical ratio, was used. This ratio is the ratio a statistic has to its standard error. When the value of  $t$  was equal to or greater than 3, the difference was considered very significant. When the value was less than 3 but equal to or greater than 2, the difference was considered to be significantly greater than zero. This device was used to determine a significance between two uncorrelated means, between two uncorrelated standard deviations, and between two percentages.

#### Significant findings

The results of this study indicate that married students differ significantly from single stu-

dents in three educational areas. They are as follows:

1. [Married students achieve higher college marks than single students.]
2. Married students have more work experience related to their educational objective.]
3. Single students change their educational objectives more frequently.)

Poor housing and lack of finances appear to be the factors which handicap the married student the greatest. Those married students who provide themselves with adequate financial resources and suitable housing prior to enrollment will insure for themselves a better chance of succeeding in college.

By correlating the findings of this study with the expressed attitudes of the married students, it is possible to infer that married students do significantly better college work because they are [more serious of purpose and possess a high degree of motivation to succeed.]

### Recommendations

1. On the basis of the results of this study, it appears evident that counselors should assure the majority of married men that marriage is an asset and not a liability to an entering college freshman. This counseling should be given on an individual basis and should consider for each married man the factors which are applicable to his situation, especially those dealing with housing and finance.



2. College and university administrators should not only encourage married men to enroll in college, but they should assist them in every possible manner to attain their educational goal.

Suggestions for  
further study

Future studies should seek the answers to the following questions:

1. Is there a significant difference in the number of married students who drop out of school as compared to single students?

2. Do family adjustment problems increase or decrease with length of time spent in college?

3. To what extent are the findings of this study applicable to married students who are not veterans?

4. How does the divorce rate among married students in college compare with national statistics on the divorce rate of a comparable group?



THESIS

-----

EFFECT OF  
MARRIAGE UPON  
ACADEMIC ACHIEVEMENT

Submitted by  
Courtlyn Hotchkiss

In partial fulfillment of the requirements  
for the Degree of Master of Education  
Colorado

Agricultural and Mechanical College

Fort Collins, Colorado

August, 1948

LIBRARY  
COLORADO A. & M. COLLEGE  
FORT COLLINS, COLORADO

378.788  
A D  
1948  
13  
cop. 2

COLORADO AGRICULTURAL AND MECHANICAL COLLEGE

August 1 1948

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY  
SUPERVISION BY COURTLYN HOTCHKISS  
ENTITLED EFFECT OF MARRIAGE UPON ACADEMIC ACHIEVEMENT.

BE ACCEPTED AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF EDUCATION

MAJORING IN GUIDANCE AND COUNSELING

CREDITS 6

George A. Comstock

In Charge of Thesis

APPROVED

David H. Morgan

Head of Department

Examination Satisfactory

Committee on Final Examination

Benjamin J. Novak

Harris T. Guand

Herb Healy

George A. Comstock

Robert W. Davis

Dean Stinson

David H. Morgan

Dean of the Graduate School

Permission to publish this thesis or any part of it  
must be obtained from the Dean of the Graduate School.



## ACKNOWLEDGMENTS

The writer wishes to acknowledge his appreciation for assistance in preparing this thesis to the following faculty members of Colorado Agricultural and Mechanical College:

Dean David H. Morgan, Head of the Department of Psychology and Dean of the Graduate School; Kenneth L. McAferty, Assistant Director of Veterans Affairs; and Dr. James G. Hodgson, Librarian.

Mrs. Mabel G. Krumm, English adviser and typist; the 200 students of Colorado Agricultural and Mechanical College who were the subjects of the study; and his wife, Mrs. Bettie J. Hotchkiss, for her constant encouragement and assistance.

## TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
I	INTRODUCTION . . . . .	7
	The problem . . . . .	8
	Analysis of the problem . . . . .	9
	Delimitation . . . . .	9
II	REVIEW OF LITERATURE . . . . .	10
	Intelligence and academic achievement . . . . .	10
	Summary and implication . . . . .	12
	First-quarter grades and academic achievement . . . . .	12
	Summary and implications . . . . .	12
	Age and academic achievement . . . . .	13
	Summary and implication . . . . .	14
	Employment and academic achievement . . . . .	14
	Summary and implications . . . . .	15
	Motivation and academic achievement . . . . .	16
	Summary and implications . . . . .	17
	Marital problems and academic achievement . . . . .	18
	Summary and implications . . . . .	27
III	METHODS AND MATERIALS . . . . .	28
	Data-collecting devices . . . . .	28
	Sample . . . . .	30
IV	ANALYSIS OF DATA . . . . .	35
	Statistical procedures . . . . .	34
	Equivalence of the two groups . . . . .	34
	Academic achievement . . . . .	36
	Outside employment . . . . .	38
	Credit hours carried . . . . .	39
	Hours spent in study . . . . .	41



## TABLE OF CONTENTS.--Continued

<u>Chapter</u>		<u>Page</u>
IV	ANALYSIS OF DATA.--Continued	
	Educational objectives . . . . .	42
	Students having the same educational objective as when they graduated from high school . . . . .	43
	Students having previous work experience related to their educational objective . . . . .	43
	Students changing their educational objective during the first year in college . . . . .	44
	Attitudes of married students toward effect of marriage upon grades . . . . .	46
	Factors assisting in college work . . . . .	46
	Factors hindering college work . . . . .	48
V	DISCUSSION . . . . .	51
	Academic achievement . . . . .	51
	Outside employment . . . . .	52
	Credit hours carried . . . . .	53
	Hours spent in study . . . . .	53
	Educational objectives . . . . .	54
	Attitudes of married students . . . . .	55
	Effect of marriage upon academic achievement . . . . .	57
	Recommendations . . . . .	57
	Suggestions for further study . . . . .	58
VI	SUMMARY . . . . .	59
	Significant findings . . . . .	60
	APPENDIX	
	BIBLIOGRAPHY	

## LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	COMPARISON OF MARRIED AND SINGLE STUDENTS ACCORDING TO AGE . . . . .	35
2	COMPARISON OF MARRIED AND SINGLE STUDENTS ACCORDING TO AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION PERCENTILE TEST SCORES . . .	36
3	ACADEMIC ACHIEVEMENT OF FRESHMAN STUDENTS CLASSIFIED AS MARRIED OR SINGLE . . . . .	37
4	SIGNIFICANCE OF DIFFERENCE BETWEEN MARRIED AND SINGLE STUDENTS IN ACADEMIC ACHIEVEMENT . . . . .	38
5	COMPARISON OF MARRIED AND SINGLE STUDENTS ACCORDING TO EXTENT OF OUTSIDE EMPLOYMENT . . . . .	39
6	CREDIT HOURS CARRIED BY MARRIED AND SINGLE STUDENTS . . . . .	40
7	COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO NUMBER OF CREDIT HOURS CARRIED PER QUARTER . . . . .	40
8	COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO NUMBER OF HOURS STUDIED PER WEEK . . . . .	41
9	COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO NUMBER OF HOURS SPENT IN STUDY PER WEEK . . . . .	42
10	COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO WHETHER THEY CHANGED THEIR EDUCATIONAL OBJECTIVE SINCE HIGH SCHOOL GRADUATION, HAD WORK EXPERIENCE CONNECTED WITH EDUCATIONAL OBJECTIVE, AND, WHETHER THEY CHANGED THEIR EDUCATIONAL OBJECTIVE DURING THE FIRST YEAR OF COLLEGE . . . . .	45



## Chapter I

### INTRODUCTION

With the termination of World War II and the subsequent large veteran enrollment which flooded the campuses of colleges and universities throughout the United States, a number of unique problems evolved.

College officials were faced with the necessity of initiating large building programs in order to expand their facilities to the proportions required by this tremendous enrollment.

One of the most important changes which took place in colleges and universities with the return of the servicemen was the considerable increase in the number of married students. Statistics released by the American Council on Education (21), 1948, revealed that almost one-third of the veterans enrolled in colleges and universities were married and that 40 per cent of this group had one or more children.

The "G. I. Bill of Rights" enabled married men to attend college "en masse" for the first time in history. Over 300,000 of them were attending colleges and universities during the fall of 1946. This mass migration not only created considerable confusion on the campuses but

also created a new social pattern in institutions of higher education.

The enrollment of large numbers of married men in colleges was such a unique situation that the attention of the public was soon focused upon it. No sooner had the married students settled into the routine of attending classes than the public began clamoring for statistical reports comparing this group with the single students. The question most commonly heard was, "How does the scholastic work of the married man compare with that of the single man?"

This thesis was not written merely to satisfy the curiosity of the public concerning the above mentioned question. It was written, rather, to determine whether there were any unique factors which affected the academic achievement of this group.

It is hoped that the results of this work will be of value in the guidance of married men who are concerned with the possibilities of attaining a college degree even though they have taken on the responsibilities of family life.

#### The problem

The problem of this study is, What effect does marriage have upon the academic achievement of entering college freshman?



Analysis of the problem.--1. How do the college marks of married freshman students compare with those of single freshman students?

2. What is the difference between the two groups in terms of outside employment while enrolled in college?

3. What is the difference between the two groups in terms of the number of credit hours carried?

4. What is the difference between the two groups in terms of the number of hours spent in study?

5. What is the difference between the two groups in terms of educational objectives to be gained from college attendance?

6. According to the married students, what effect does being married have upon their college work?

Delimitation.--This study will be confined to two groups of 100 students each who were enrolled at Colorado A & M College during the Fall Quarter of the school year 1946-47. One hundred of these were married students who entered college as first-quarter freshmen. The other group of 100 was composed of single students who entered college as first-quarter freshmen. All students were veterans of World War II.

## Chapter II

## REVIEW OF LITERATURE

As pointed out in the preceding chapter, very little research work has been reported concerning the effect of marriage upon academic achievement. It was therefore determined that a review of the literature should include material pertaining to factors affecting the academic achievement of all college students.

The literature concerning this problem is grouped as follows:

1. Intelligence and academic achievement.
2. First-quarter grades and academic achievement.
3. Age and academic achievement.
4. Employment and academic achievement.
5. Motivation and academic achievement.
6. Marital problems and academic achievement.

Intelligence and academic achievement

Numerous studies are readily found in educational literature which concern the relationship between intelligence and academic achievement. Several of these findings are included herewith to establish the fact that there is general agreement among educators that a positive relationship exists between these two variables.



Odell (15), 1927, found that a range of from .40 to .50 or slightly higher was the usual correlation found between intelligence test scores and freshman college achievement. He used several different intelligence tests and found that these data held true.

Line and Glen (11), 1935, in a similar study found an average correlation of .47 when they compared intelligence test scores and grades in school subjects of a group of senior high school students.

Manning (12), 1939, reported a correlation of .67 between the American Council of Education Psychological Examination and first-year college grades.

Douglas (4), 1943, Segel (19), 1934, and Wagner (23), 1934, were in near agreement on the relationship between intelligence and scholastic success. Each reported respectively, median correlations of .45, .44, and .40 to .50 between these two variables.

Gould (10), 1944, found that the American Council of Education Psychological Examination was the best single predictor of college success at Colorado A & M College. He reported finding a correlation of .63 between these two variables.

Stinson (20), 1947, stated the following after making an extensive survey of the literature dealing with predicting college success: "Intelligence is a good predictor of college success, ranging in most studies from a

correlation of .40 to .50." (20:42)

Summary and implication.--Intelligence seems generally to be accepted as an important factor affecting academic achievement. In order to insure the constancy of the factor of intelligence, the two groups involved in this study will be equated on the basis of American Council of Education Psychological Examination test scores.

First-quarter grades  
and academic achievement

In studying the comparative academic achievement of married and single students, only first-quarter grade point averages will be used. This procedure will be adhered to since there is evidence to indicate that first-quarter grades are a reliable basis for predicting college success.

Cole (3), 1940, stated that first-term grades of college students are indicative of those they will continue to earn.

Eurich and Cain (6), 1941, reported that college grades achieved by students during their first term in college correlated sufficiently high to base college graduation on success during first term.

Summary and implications.--The procedure of using first-quarter grades as the basis for comparing the academic achievement of two groups of students is valid according to the studies cited above.



### Age and academic achievement

Numerous studies have been conducted to determine the relationship between age and academic achievement. According to Dwyer (5), 1939, many studies have been made which point strongly to the conclusion that younger students do better than older ones in college work. This he substantiates in his work; however, he points out that there is only a little variation and in some cases the older groups show higher college marks.

According to Weschler (24), 1944, there is little change in the I. Q. from the late teens and early twenties (15-22) until one reaches about 35 years of age. At this point the decline becomes more marked.

Sward (22), 1945, pointed out that there was very little difference in grades made by young men and those made by much older men having the same intelligence scores. Other factors being equal, he found that age has the effect of impairing the rate far more than the quality or the accuracy of the mental operations. This study would tend to show that a change in chronological age of only three or four years in the normal adult would not account for any great increase or decrease in academic achievement.

Garnezy and Crose (8), 1948, studied the comparative academic achievement of veteran and non-veteran students at the University of Iowa. Realizing that age was a factor to be considered when comparing students as

to academic achievement, they studied the effect of this factor and reported the following:

A frequency distribution of the ages of the members of the two groups indicated the impossibility of matching for age because the veterans were so consistently older that there was little overlap between the groups. Therefore, the possible effect of age alone upon achievement was studied in the veteran group. The correlation between grade point average and age for the 564 veterans was .00. To study further the influence of age the grade point average for 99 veterans born in the years 1927 and 1928 was compared with that of 70 veterans born in 1922 and 1923. The obtained mean grade point averages were respectively 2.20 and 2.05. The critical ratio of 1.36 is not statistically significant. Furthermore, the tendency, if any, appeared to be in the direction of offering a slight advantage to the younger veterans. On the basis of these results it was felt that the effect of age could be ruled out as an important variable associated with academic achievement. (8:548)

Summary and implication.---Studies indicate that age does not have a marked affect upon academic achievement. However, to insure that this factor will not affect the achievement of the married group differently than the single group, the two groups in this study will be equated as to age.

Employment and academic achievement

Outside employment while attending college is often given as the cause for low academic achievement. It is not uncommon to be told by students that the primary factor underlying their poor scholastic record is a heavy



employment load. Since this is a factor to be considered when comparing two groups as to academic achievement, several studies concerning this problem have been investigated.

Williamson (25), 1937, compared 94 freshman National Youth Administration workers with an equated group of non-employed students and found a slight difference in their grade averages in favor of the working student.

Clark (2), 1938, made a study of two equated groups of college students. He reported finding that students who worked part-time made slightly higher grade averages than those who did not work.

In 1941 Baker (1) concluded the following after making a study of total student load:

In an analysis of the average total load carried by students making certain grades it was found that there was no great difference in the amount of work carried by those making different grades. This was particularly true for all making average grades between 1.375 and 2.875 credit points. In fact those making low averages of .375 and .625 credit points carried lighter loads than any other groups. Only in the cases of those receiving average grades of .125, .875, and 1.125 did larger work loads seem plausible causes. The coefficient of correlation for the relationship between total load and grade average was .099, confirming the other evidences of a very low relationship. (1:35)

Summary and implications.--Studies concerning the relationship between employment and academic achievement indicate that working students achieve about the same or slightly better college marks than do non-working stu-

dents. There is some reason to believe that this factor will enter into the results of this study since married students are faced with a relatively higher cost of living than single students and may be forced to seek more employment to supplement their income.

Motivation and academic achievement

Motivation, as a factor affecting academic achievement, is readily accepted in the fields of education and psychology. It is generally agreed that, other factors being equal, students who possess a high degree of motivation toward achieving a college education have a better chance of succeeding than those who are not motivated.

Moore (13), 1942, carried out some research with a group of students at Hanover College to determine the degree of motivation upon enrollment. He reported:

Motivation, as an aspect of student success, deserves further investigation; and questionnaire responses have, in one college which is not necessarily typical, given predictions sufficiently accurate to indicate the method is worth further study. (13:269)

Porter (18), 1946, noted that the returning servicemen were doing well in college because of the motivation factor. She reported:

Most veterans have come to school with a serious purpose. They have outgrown much of the adolescent immaturity that characterizes the student who comes directly from high school. The veterans are giving to campus life a so-



lidity and seriousness which it needed.  
(18:102)

The Crowell-Collier Publishing Company (7)  
published a veteran's report in 1946 which stated:

The average veteran attending college is three or four years older than is the student who comes directly from high school. Experience has matured him. He has seen the value of advanced training in the armed forces and has a high regard for its benefits. He is anxious to make up for time lost out of civilian life. Consequently, he has a direct vocational interest in higher education and wants to get on with the job and complete his training as soon and as well as possible. Between 30 and 40 per cent of veteran students are married and this responsibility adds materially to their seriousness of purpose. (7:19)

Many educators are of the opinion that the splendid performance of veterans on college campuses is the result of their strong motivation. They point out that if this sense of motivation could be developed in our civilian students, the standards of higher education would be raised permanently. (7:53)

Summary and implications.--As has been pointed out, most educators are agreed that the factor of motivation plays an important role in the quality of the work that a college student produces. It must be kept in mind that, in order for motivation to enter into the results of this study, evidence must be produced to show that one group of the sample has been motivated to do better college work than the other. As cited in one reference, there has been some theorizing that married students are more highly motivated to succeed in college than single students. This

theory is based upon the married man's feelings of responsibilities of his wife and family. If all other factors affecting academic achievement are found to be equal in the two groups of this study, then it is not inconceivable that any difference in academic achievement will be due to motivation.

#### Marital problems and academic achievement

It would only seem logical that problems arising out of the marital situation would create physical and emotional reactions which would affect academic achievement. The majority of individuals will readily accept the fact that married couples are consistently faced with the necessity of working out solutions to problems such as lack of finances, pregnancy, child care, unsatisfactory housing conditions, personality conflicts and adjustments, etc. The effect that these problems have upon the academic achievement of married students is not known and very little authoritative material has been written concerning this subject. The few studies which are applicable to this work are cited in the following references:

Before the war there were very few married students attending colleges and universities. In fact, a number of institutions did not permit married students to enroll. During this period, Popenoe (17), 1938, worked with a small group of married college students and reported



that students who were married did decidedly poorer work than non-married students. He explained that this was caused by several factors the greatest of which was financial since it was regrettably true that two could not live as cheaply as one. Because of financial need, unexpected pregnancy, and problems of personal adjustment within the family, it was more difficult to concentrate upon college work according to him. He pointed out, however, that there were many exceptions to the general rule that married students make poorer grades than single students.

In 1946 Osborne (16) wrote an interesting article concerning the family life of the married student. In this publication, he identified the major problems facing married students and discussed possible solutions to them. The following paragraphs are applicable to this study:

For the married G.I. who is back at school the problems are specific. He must face the contingencies of housing, finance, study, and marital adjustments. Despite the fact that tuition, books, and 90 dollars a month are provided, he has ahead of him no simple task. But it can be done and it has been done.

It would be pleasant to wax enthusiastic about the intelligence of the large number of service men and women who are taking advantage of the educational provisions of the G.I. Bill of Rights. One might even congratulate the American people on their social vision in underwriting the education of returning service people. But that has already been done. A more important task at this juncture is to face realistically some of the problems confronting the

thousands of veterans and their wives who are filling our college and university campuses to overflowing. Sometimes the mere recognition that many others are in the same boat are helpful.

People are human, and it is only human to let everyday minor irritations centering around seemingly unimportant matters grow into major difficulties. Let's look at housing for a moment - the kind of housing available for the married couple who have been separated through the war years or whose marriage is now just beginning. For most of the students who have but recently taken off army khaki or navy blue, little resembling a rose-covered cottage is available. Undergraduate colleges have to improvise quarters for married couples. Graduate school housing facilities are generally inadequate. Furnished rooms (college style to be sure, but furnished rooms nonetheless), trailers, living quarters far from the campus (some of the University of Michigan ex-G.I.'s are living at Willow Run) are characteristic rather than exceptional.

There are many problems of personal adjustments growing out of the housing situation. It is easy enough to say that these conditions will have to be endured for only a short time, or that real love and affection will overcome inconvenience. True perhaps; but it's not easy for a woman who has looked forward to her reunion with a little-known husband and naturally has somewhat romanticized the situation to adapt herself to such inadequate and inconvenient surroundings. You are less likely to be annoyed for you are busier than she. It wouldn't be true to say that home for you is only a place to eat and sleep, but if you are busy with your class assignments it's much more nearly that for you than for your wife. Unless, of course, she's working, too.

And that leads to another important consideration. Not a few men have been brought up with the idea that for one's wife to work is a sign of one's own inadequacy. Sometimes this idea has been so deeply ingrained that in spite of what seems to be good common sense a man will refuse to accept the fact that his wife may be



happier and the whole situation more desirable if she does lend a helping hand financially. If that's your attitude or if you feel guilty because your wife is working, perhaps you can take some consolation from the evidence that this kind of marriage is being looked on with increasing approval and that there is some indication that the shoulder-to-shoulder approach is more likely to build a substantial family relationship than the earlier and still common "husband as head of the house" pattern.

Wives, too, may have developed attitudes about work experience that have to be taken into account. Here's Mrs. A. She loves her husband and wants to be of real help to him now that he has gone back to college. She knows that the library work and the typing she does for him are appreciated and of very real assistance. But that contribution is not enough to make her feel satisfied. From the time she was a small girl her family has expected her to make a name for herself. Though she hasn't fully accepted this as a desirable goal, it's a very real part of her. And recognizing that typing and library research for her husband will hardly bring her public recognition, in spite of herself she is upset.

Tied in closely with such attitudes toward work is the matter of the budget. Whether they are trying to live on the \$90.00 a month or are supplementing that very modest sum with savings or wife's earnings, budget making is still an important factor in the day-by-day living of Jane and Joe. Budgeting is discussed elsewhere in this issue, but a few words about attitudes toward budgeting seem to be in order here.

When a relatively small income has to be apportioned among the many needs of a family, a high level of cooperation is essential. It hasn't been easy for the ex-serviceman to realize that clothes, food, medical care, and many other services hitherto furnished by the Army or the Navy must now be paid for out of his own pocket. Nor has it been simple for a wife used to getting her basic allotment and supplementing it with a good salary to accept the necessity of great care in even the everyday purchases that are necessary to keep a family going.

Here, again, a cooperative, sharing, talking-through kind of procedure is essential. Recognition by each of what the other would like from the somewhat inelastic budget will help to make the most of a small thing. Extremely important is the mutual recognition that it's not easy sledding for the other fellow. Deprivations are easier to take when one knows that the other party to the marriage has to take his or her share of "sacrifices". Most important it is to face jointly this aspect of student family living.

Another practical problem full of potential difficulty is also one of budgeting - the budgeting of time. A large majority of the men and women of whom we are thinking are living together for the first time. If they were married during the war, they had for the most part a honeymoon sort of life. If they married since the war, obviously they have yet to develop a real marriage. Ordinarily, they would be spending a great deal of time together in all sorts of activities. During the evenings, movies, friends, dancing, and a great variety of other pastimes would fill their time and contribute to the development of the companionship aspect of marriage.

But a full-time program of study means that for the conscientious student a good many evenings must be spent "swatting away" at the books. It is likely to be particularly difficult for the wife to accept this in a consistently calm way, even though she may recognize its importance to her husband and to the family. Life is likely to seem pretty dull for her, even in those instances where she has developed interests of her own. Not a few experiences of growing apart have stemmed from such situations. Here, again, compromise would seem to be the most desirable thing. Further preparation for one's life work is important, of course, but so is some recreation. A frank facing of the situation and some thoughtful planning should make it possible to work out a schedule of day-to-day living that will include time for play together - time to develop mutual interests. Such a plan should make it easier, too, for the wife to lend a hand in her husband's class preparations, since she can see that will make



it possible for them to have more time together.

For almost all married couples, the question of children is an important one. For those who have decided that it was best not to have a child until it was certain that the family would be reunited, it may be particularly difficult to wait a year or two longer. In some instances, the financial situation, adequate living quarters, and other more intangible things, such as adjustment to one another in marriage, may mean that there is no reason for longer foregoing the pleasures and satisfactions of having children. But for most ex-G.I. couples there are likely to be serious doubts as to the advisability of adding immediately to the complicated pattern of living they are already following. If, however, the desire for children is so strong as to make for persisting unhappiness on the part of wife or husband or both, it may be perfectly possible for adjustments to be made. Sometimes the parents of the couple are not only willing but eager to subsidize a grandchild. In spite of the increased cost of babies, there are ways of cutting down the expense without jeopardizing the welfare of the prospective mother and child. The public health nurse or the social worker can give sound advice regarding initial costs. The item of "upkeep" will have to be worked out by the couple themselves.

Yes, this year or two of study may become a bit complicated. But if the cooperative, sharing approach is developed, if it can be constantly kept in mind that such preparation will be likely to mean much for the family in the future, and if both husband and wife will give a little and take a little as they face their daily experiences, it can be a satisfying time not only to look back upon but while it is being lived. Frankness is essential; facing the difficulties squarely and being willing to seek counsel are very important. Fortunately many of the colleges and universities have designated veterans' advisers who are more than information dispensers. Unfortunately there are still individuals who count it a confession of weakness to seek the understanding counselor who can listen and help one see a little more clearly than he could without such help. One indication of emotional maturity is the willing-

ness to look for help for incipient difficulties that can be "nipped in the bud."

Obviously, these few suggestions cannot be considered a handbook for guidance of family life. There are no pat solutions for problems arising out of family life on the campus. But the experiences of other ex-G.I. couples should be helpful in providing something of a base from which one's own adjustments can be developed. And, again, it should be emphasized that for him who looks there are always understanding counselors, official or unofficial, who can be of help during this interesting but sometimes difficult period. (16:36-39)

Morris (14) in the fall of 1946 made the following summary of the problems confronting married veteran students in college at Iowa University:

The few married veterans at Iowa who have so far dropped out of school have done so because their marriages folded up - not because they flunked out! For no longer is learning divorced from living. The student who cuts a class today is not apt to cut for the sheer job of cutting; more likely it is because his wife is sick and he has to look after the baby.

The four principle stages in student-family-development are analyzed briefly on the pages opposite. Underlying them all is the new social status of the collegiate family, as newly advanced as the G.I. Bill. But every social advance creates problems along with progress, just as slum clearance project may make it temporarily tough on those who live in the slums. Here are some of the rough edges on the G.I. Bill:

1. While the serviceman's tuition is paid by the Government, his wife must pay her own way. Except for wives who were themselves service women and thus have G.I. benefits of their own, almost no wives at Iowa are currently attending classes with their husbands. Many, it is true, managed to finish school while their husbands were at war, but most have not. But while the men are gaining a formal education, the wives are learning the hard but perhaps more



permanent way, what wives traditionally have to know.

2. Even if some provision could be made for the education of wives, there is still the problem of maternity and child care. Not only does the G. I. Bill make no provision for extra dependents, as does the serviceman's family allotment plan, but maternity care alone is a tremendous burden on the average student budget.

3. Neither is there provision, in the G.I. Bill for funds for nursery schools. At Iowa, the university operates a model Pre-School. But its regular clients, Iowa City children, crowd it to capacity. And to date the university has been unable to secure funds to extend Pre-School facilities to the children of students.

Despite these pitfalls, educators agree that the G.I. Bill has had a healthy influence on American higher education, in so far as it has established the principle of government sponsorship of adult education in residential colleges without prejudice as to parentage, pocketbook, or marital status. However, the full realization of this advance may depend on just how well the attendant family problems can be solved.

In this respect modern Sweden has set an example worthy of study. There, stimulated by the example of famous author-sociologist, Gunnar Myrdal and wife, potential university students are systematically encouraged to marry young and continue school together. Nurseries operate in conjunction with the universities to care for children, and dormitories are built on the lines of low-cost housing projects. As a result, bright young people are encouraged to marry early, to have children, to learn to live together as full-fledged citizens as soon as possible. (14:35)

The American Council on Education (21), 1946, published the following information concerning the problems of married veteran students:

The search for suitable housing, recreational facilities for the children, medical care for their families, etc., have served to burden the married veteran with responsibilities not faced by the other students. How have these conditions affected the family life of these veterans? When the married veterans in this nation-wide poll were asked to comment on the extent to which their living conditions had affected their family life, 23 per cent of the childless veterans and 35 per cent of those with one child replied that their living conditions had interfered with the maintenance of happy family relationships. One in every two married veterans reported that their living conditions has had no effect on their family life.

Many special facilities have been provided by individual colleges and universities for the wives and children of the married veterans. Despite the splendid efforts of many institutions in the behalf of these families, however, the responses of a nation-wide sample of married college veterans indicates that much remains to be done. The married veterans in this nation-wide poll were asked if they would cite instances of special provisions or facilities which their institution had provided for their wives or for their children. Fourteen per cent of those interviewed replied that nursery schools had been provided while 12 per cent stated that organizations to which the wives could belong had been formed. Eleven per cent cited recreational facilities while 7 per cent responded that medical care had been provided. However, 6 in every 10 married college veterans could cite no special facilities which their institution had provided for their families.

With the increased enrollments and the necessity, in many instances, of using every available room for student residences, some question has arisen as to the effect of such emergency housing on the studies of the students. When questioned with regard to this problem the married veterans with children were found to be at the greatest disadvantage, with three in every ten replying that their grades had been lowered because of the study



conditions. One in five single veterans replied in a similar manner. Among the most important deterrents to adequate study conditions were "space limitations", "home too distant", "family troubles", and "household chores". (21:2-3)

Summary and implications.---There appears to be two schools of thought concerning the effect of marital problems upon academic achievement. One group feels that the added responsibility of marriage places an additional obstacle in the path of married students. The other group reasons that the added responsibility placed upon the married student assists him in clearly seeing the need for serious and diligent application to his work. It is hoped that this thesis will be of value in determining the correct answer to the problems.



### Chapter III

#### METHODS AND MATERIALS

The presentation of the methods and materials utilized to determine the effect of marriage upon academic achievement includes the description of the data-collecting devices and the selection of the sample.

##### Data-collecting devices

Data concerning the academic achievement of students constituting the sample obtained from the records in the office of the Registrar included first-quarter achievement in terms of grade-point average, to be referred to as G. P. A.

G. P. A. was obtained by the following method:

Letter grades for the first quarter of college were weighted so that an "A" equaled 4, a "B" equaled 3, a "C" equaled 2, a "D" equaled 1, and an "F" equaled 0. Courses recorded as "withdrawn failing" were counted as an "F". Courses recorded as "withdrawn passing" were not counted. These weights were multiplied by the number of hours for which a student had registered in each instance.

The resultant figure, which represents the number of quality points, was then divided by the total number of hours for which the individual was enrolled to

obtain the G. P. A.

The minimum acceptable G. P. A. that a student must maintain to remain in college beyond his freshman year is 2.0.

Data concerning the following areas were collected by the use of an interview form:

1. Educational objectives.
2. Hours employed.
3. Hours in study.
4. Attitude toward marriage.

The interview form was constructed to secure valid data that were only available through contact with the individuals included in the sample.

A tentative interview form was prepared and administered to a number of students who visited the Office of Veterans Affairs. With their help and the help of several staff members, the interview form was altered so that it was clear and easily completed.

The final draft 1/ of the interview form contained seven questions regarding the selection of the educational objective by the student, one question concerning outside employment, one question regarding hours spent in study, and two questions aimed at uncovering married stu-

1/ See Appendix A for copy of interview form.



dents' attitudes toward marriage as it affected their college marks.

The interview form was administered personally to 124 of the 200 students included in the sample, or 62 per cent. These individuals were enrolled in college at the time of this study and were requested to visit the author in his office. The remaining 76, or 38 per cent, had withdrawn from college and were mailed copies of the interview form along with a personal letter explaining the form and soliciting their cooperation in completing and returning it. Of the 76 copies mailed out, 30 were returned completed, and 13 were returned due to incorrect addresses.

Total interview forms administered or completed and returned were 154, or 82.38 per cent of 187 contacted.

The interest of the students included in the study was amazing. A majority requested that they be allowed to read the completed manuscript and thanked the author for including them in the sample. The married students seemed to be slightly more interested than the single group.

#### Sample

An examination of the records of the Office of Student Affairs revealed that in the fall quarter of the school year 1946-47 there were 254 married students enrolled who were attending college for the first time. It



was determined that a chance sample of 100 should be taken as the experimental group for this study. The married students' names were listed alphabetically and every other name was selected until 100 had been secured.

After selecting the experimental group, the records of the Colorado A & M College Testing Bureau were investigated to secure the percentile test score of the American Council on Education Psychological Examination, to be referred to as the A. C. E., for each married student in the sample. The records of the Office of Veterans Affairs were utilized to determine the ages of these students to their nearest birthday. These records were also checked to make certain that all students in the experimental group were male veterans.

In order to compare the academic achievement of married students with that of single students, it was determined that it would be necessary to select a control group of single students equated to the experimental group according to A. C. E. percentile test scores, age, sex, and military service.

The records of the Office of Student Affairs revealed that there were 833 single freshman students who had entered college in the fall quarter of the school year 1946-47. Students from this group were matched with married students in the experimental group so that there was no more than two percentile points difference in their

A. C. E. test scores nor one years difference in their ages taken at the nearest birthday. Sex and military service were equated since all of those included in each group were ex-servicemen as indicated by the records of the Office of Veterans Affairs.



## Chapter IV

### ANALYSIS OF DATA

In order to provide data concerning the factors affecting the academic achievement of married freshman students in college, an investigation was made of 200 freshman students, half of whom were married, who were enrolled at Colorado Agricultural and Mechanical College during the fall quarter of the 1946-47 school year.

The data were obtained by the use of two methods, which were as follows:

1. An analysis of the records of the college registrar, the college testing bureau, college veteran's affairs office, and the college student affairs office to obtain data relative to the enrollment, college achievement, test scores, military service, and age.
2. The administration of a personal interview form to 154 students of the sample to obtain information pertaining to the selection of educational objectives, employment, time spent in study and attitudes of married students toward the effect of marriage on their college marks.



These data will be presented under the following headings: "Equivalence of the two groups," "Academic achievement," "Outside employment," "Credit hours carried," "Time spent in study," "Educational objectives," and "Attitudes of married students toward effect of marriage on college marks."

#### Statistical procedures

In order to determine the significance of the difference between two statistics,  $t$ , the critical ratio, was used. This ratio is the ratio a statistic has to its standard error. When the value of  $t$  was equal to or greater than 2, the difference was considered to be significantly greater than zero. This device was used to determine a significance between two uncorrelated means (9:210), between two uncorrelated standard deviations (9:223), and between two percentages (9:226).

#### Equivalence of the two groups

As previously recorded in Chapter III, the two groups of the sample, the experimental group and the control group, were equated as to period of enrollment, sex, military service, age, and percentile test scores made on the American Council on Education Psychological Examination.

Period of enrollment, sex, and military service were easily equated since every individual in each group

was an entering male college freshman in the fall quarter of the school year 1946-47 with over 90 days of service in the armed forces.

Even though the two groups were roughly matched according to their ages and scores on the American Council on Education Psychological Examination, they were evaluated statistically to ascertain the equivalency of the two groups in terms of the above factors.

It is evident from Table 1 that the two groups are comparable as to age since the difference in the mean ages is only .06 and the difference in the standard deviations is only .24. For further evidence that the two groups are comparable, one need only to observe that the standard error for the difference of the means is 3.25 and the critical ratio,  $t$ , is .019. The standard error for the difference of the standard deviations is .23 and the critical ratio,  $t$ , is 1.04. Since a  $t$  of less than 2 is not considered significant, the groups may be considered to be comparable as to age.

Table 1.--COMPARISON OF MARRIED AND SINGLE STUDENTS  
ACCORDING TO AGE.

Age	Married	Single	Difference	S.E.	t
Mean	22.82	22.76	.06	3.25	.019
S. D.	2.43	2.19	.24	.23	1.04
Range	18-32	19-32			



It is evident from Table 2 that the two groups of the sample are comparable as to scores made on the American Council on Education Psychological Examination. The difference in the mean test scores is only .21, and difference in the standard deviation is only .70. Since in both cases the  $t$ , is considerably less than 1, the two groups may be considered to be comparable as to this factor.

Table 2.--COMPARISON OF MARRIED AND SINGLE STUDENTS ACCORDING TO AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION PERCENTILE TEST SCORES.

A.C.E.	Married	Single	Difference	S.E.	t
Mean	51.90	51.69	.21	3.66	.058
S.D.	25.48	24.78	1.30	2.51	.28
Range	4-99	4-99			

### Academic achievement

An analysis of the data collected revealed that grade point averages were available on 100 students of the control group and 97 students of the experimental group. Three of the married students withdrew-passing during the first quarter and received no grades.

Table 3 reveals some interesting facts concerning the comparative grade averages of married and single students. Of those students securing a grade point average of 3.50 to 4.00, which is equivalent to a letter grade of B plus or better, 11.3 per cent of the married group fell

within this range as compared to three per cent of the single group who did this well. A grade point average of 3.0 or better was achieved by 22.6 per cent of the married group as compared to 12 per cent of the single group. On the lower end of the grade scale, it may be noted that there were 12 per cent of the single group who made less than a 1.0 average, which is less than a letter grade average of D, whereas there were only 6.4 per cent of the married students who did this poorly.

Table 3.--ACADEMIC ACHIEVEMENT OF FRESHMAN STUDENTS CLASSIFIED AS MARRIED OR SINGLE.

G.P.A.	Married (N=97)			Single (N=100)		
	N	%	Cumulative Per cent	N	%	Cumulative Per cent
3.75-4.00	5	5.1	100.0	0		100
3.50-3.74	6	6.2	94.9	3		100
3.25-3.49	4	4.1	88.7	1		97
3.00-3.24	7	7.2	84.6	8		96
2.75-2.99	5	5.1	77.4	9		88
2.50-2.74	7	7.2	72.3	14		79
2.25-2.49	11	11.3	65.1	9		65
2.00-2.24	24	24.7	53.8	17		56
1.75-1.99	6	6.2	29.1	5		29
1.50-1.74	9	9.3	22.9	9		34
1.25-1.49	2	2.1	13.6	6		25
1.00-1.24	5	5.1	11.5	7		19
.75-.99	1	1.0	6.4	2		12
.50-.74	3	3.3	5.4	6		10
.25-.49	0	0	2.1	0		0
.00-.24	2	2.1	2.1	4		4
Mean			2.30			2.05
S.D.			.845			.840

In order to determine whether or not the difference in grade point average was significant, it was neces-



sary to determine the ratio of the obtained difference, .250, to its statistic. This comparison revealed that the difference is statistically significant from zero. A critical ratio of this value indicates that there are 98 chances in 100 that the married group will exceed the single group in scholastic achievement, Table 4. There was no significant difference however, between the two groups in terms of variability.

Table 4.--SIGNIFICANCE OF DIFFERENCE BETWEEN MARRIED AND SINGLE STUDENTS IN ACADEMIC ACHIEVEMENT.

Academic achievement	Married	Single	Difference	S.E.	t
Mean	2.30	2.05	.25	.124	2.01
S.D.	.845	.840	.005	.085	.058

#### Outside employment

Of the married men who worked, 12 per cent were employed 40 or more hours per week, whereas none of the single group worked this much, Table 5. It is also evident that there is slight difference between the two groups in terms of the number employed since 26 out of 82 married students work as compared to 20 out of 72 single students, or 31.7 per cent compared to 27.7 per cent.

To determine the significance of difference in the percentages, the standard error was computed and found to be 7.3. The critical ratio,  $t$ , was found to be .54.

Since a  $t$  of less than 2 is not considered significant from zero, the two groups may be considered to be comparable as to the number of students employed.

Table 5.--COMPARISON OF MARRIED AND SINGLE STUDENTS ACCORDING TO EXTENT OF OUTSIDE EMPLOYMENT.

Extent of outside employment	<u>Married</u>		<u>Single</u>	
	N	Per cent	N	Per cent
<u>Hours employed</u>				
50-59	1	3.9	0	0
40-49	2	7.7	0	0
30-39	1	3.9	1	5
20-29	7	26.9	4	20
10-19	12	46.1	13	65
1-9	3	11.6	2	10
<u>TOTAL</u>	<u>26</u>	<u>100.0</u>	<u>20</u>	<u>100</u>
Employed	26	31.7	20	27.7
Unemployed	56	68.3	56	72.3
<u>TOTAL</u>	<u>82</u>	<u>100.0</u>	<u>72</u>	<u>100.0</u>

#### Credit hours carried

It is evident from an investigation of the data collected on credit hours carried that the married and single students enrolled for about the same number of credit hours per quarter. By examining Table 6, one can readily see that 46.3 per cent of the married and 48 per cent of the single students enrolled for either 15 or 16 quarter hours. It can also be noted that 89.6 per cent of the married students carried from 13 to 17 hours as compared to 82 per cent of the single students carrying the same academic load.



Table 6.--CREDIT HOURS CARRIED BY MARRIED AND SINGLE STUDENTS.

Number of hours	Married		Single	
	N	Per cent	N	Per cent
23	0	0	1	1
22	0	0	0	0
21	0	0	0	0
20	1	1.1	0	0
19	0	0	2	2
18	6	6.2	8	8
17	10	10.3	9	9
16	25	25.7	27	27
15	20	20.6	21	21
14	12	12.4	10	10
13	20	20.6	15	15
12	3	3.1	4	4
11	0	0	2	2
10	0	0	1	1
TOTAL	97	100.0	100	100

A further analysis of the above data, Table 7, shows that the two groups of students are comparable, on the average, as to number of credit hours carried. This is evidenced by a difference in the means of .27 and a difference in the standard deviations of .17. In both cases,  $t$  is less than one and no true difference has been demonstrated.

Table 7.--COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO NUMBER OF CREDIT HOURS CARRIED PER QUARTER.

Credit hours	Married	Single	Difference	S.E.	$t$
Mean	14.93	15.20	.27	.30	.90
S.D.	2.03	2.20	.17	.21	.81

Hours spent in study

Certainly a factor which is commonly associated with academic achievement is that of time spent outside of class studying. Data collected and analyzed on the two groups of this study indicated that the single group studied slightly more than the married group. However, Table 8 indicates that the majority of each group studied from 16 to 35 hours per week. This is evidenced by the fact that 79.3 per cent of the married men studied from 16 to 35 hours as compared to 70.8 per cent of the single students.

Table 8.--COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO NUMBER OF HOURS STUDIED PER WEEK.

Hours studied	Married		Single	
	N	Per cent	N	Per cent
46-50	1	1.2	1	1.4
41-45	0	0.0	3	4.2
36-40	3	3.7	8	11.1
31-35	12	14.7	9	12.5
26-30	14	17.1	16	22.2
21-25	25	30.4	12	16.7
16-20	14	17.1	14	19.4
11-15	7	8.5	6	8.3
6-10	6	7.3	1	1.4
1-5	0	0	0	0
0	0	0	2	2.8
TOTAL	82	100.0	72	100.0
Mean	24.35		26.64	
S.D.	8.0		10.05	

Even though Table 8 indicates that the single students studied slightly more than the married group,



this difference is not statistically significant from zero. Table 9 reveals that the difference in the means is 2.29 and the difference in the standard deviations is 2.05. The standard error of the difference of the means is 4.14 and the critical ratio,  $t$ , is .55. The standard error of the difference of the standard deviations is 2.95 and the critical ratio,  $t$ , is .61. Since a  $t$  of less than 2 is not considered significant from zero, the two groups may be considered to be comparable as to time spent in study.

Table 9.--COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO NUMBER OF HOURS SPENT IN STUDY PER WEEK.

	Married	Single	Difference	S.E.	$t$
Mean	24.35	26.64	2.29	4.14	.55
S.D.	8.0	10.05	2.05	2.95	.61

### Educational objectives

An analysis of the manner in which the married and single students selected and pursued their educational objectives was determined to be pertinent to this study since it is not inconceivable that these factors have an effect upon the success achieved in the objective. Data are presented concerning three areas associated with educational objectives:

1. A comparison of the two groups as to the number of students who retained the same educational

objective as when they graduated from high school.

2. A comparison of the two groups as to previous work experience related to the educational objective chosen.

3. A comparison of the two groups as to the number of students who changed their objective during their first year in college.

Students having the same educational objective as when they graduated from high school.--The number of married students who retained the same educational objective from graduation from high school to enrollment into college was 36 or 43.9 per cent as compared to 22 single students or 30.5 per cent who retained their objective for this period, Table 10.

To determine the significance of the difference in the percentages of married and single students retaining their objectives, the standard error of the difference between two percentages was computed. The standard error was found to be 7.7 and the critical ratio,  $t$ , was 1.74. Since  $t$  is less than 2, this difference is not considered statistically significant from zero. However, the chances are 96 in 100 that, on the average, more married students than single students will have the same educational objective as when they graduate from high school.

Students having previous work experience related to their educational objective.--It is evident from Table 10 that a larger percentage of married students had work



experience related to the educational objective which they chose than did single students. Married students having work experience numbered 57 or 69.5 per cent as compared to 39 single students or 54 per cent. It is interesting that more than one half of both groups had worked in jobs connected with their educational objective.

The standard error of the difference between the two percentages was found to be 7.7 and the critical ratio,  $t$ , was 2.14. This  $t$  is greater than 2 and therefore the difference is considered to be statistically significant from zero, since there are 98 chances in 100 that, on the average, more married students than single students will have work experience related to their objectives.

Students changing their educational objective during the first year in college.--Table 10 reveals that fewer married students changed their educational objective during the first year of college as compared to single students. The number of married students changing their objective was 22 or 26.8 per cent as compared to 32 single students changing their objective or 44.4 per cent.

The standard error of the difference between the two percentages was found to be 7.7 and the critical ratio,  $t$ , was 2.42. Since  $t$  is greater than 2, the difference in percentages is considered to be statistically significant from zero. A  $t$  of 2.42 indicates that there are 99 chances in 100 that, on the average, more single students than married will change their objective during the first year.

Table 10.--COMPARISON OF MARRIED AND SINGLE STUDENTS AS TO WHETHER THEY CHANGED THEIR EDUCATIONAL OBJECTIVE SINCE HIGH SCHOOL GRADUATION, HAD WORK EXPERIENCE CONNECTED WITH EDUCATIONAL OBJECTIVE, AND, WHETHER THEY CHANGED THEIR EDUCATIONAL OBJECTIVE DURING THE FIRST YEAR OF COLLEGE.

	<u>Married (N=82)</u>		<u>Single (N=72)</u>		Difference	S.E.	t
	Number	Per cent	Number	Per cent			
Retained objective	36	43.9	22	30.5	13.4	7.7	1.74
Work experience	57	69.51	39	54.03	15.48	7.7	2.14
Changed objective	22	26.83	32	44.44	17.61	7.7	2.42



Attitudes of married  
students toward effect  
of marriage upon grades

Data concerning the attitudes of 82 married students toward the effect of marriage upon college grades were collected by compiling statements 1/ of the married students in the sample as to the manner in which marriage assisted or hindered them in their college work. It is significant to note that with very few exceptions the married students expressed the belief that marriage was a very definite asset to them as students attending college. Those who listed areas where they felt that marriage might be a hindrance were quick to explain to the administrator of the interview form that the good points of marriage greatly out-weighed the bad.

Factors assisting in college work.--The factor most often referred to by married students as an asset was that of increased motivation to succeed in their college work. This feeling was expressed in many different ways, by 51 students, but in each it is readily identified as the underlying thought.

"More settled down; don't waste as much time;  
study harder due to responsibilities."

"More conscious of responsibility to finish  
school"

---

1/ See Appendix B for responses to interview form.

"Realize responsibilities."

"Responsibility makes school a job instead of a game."

"Motivation greater; don't give up easily."

"Responsibilities increase motivation."

"Keep nose to grindstone."

"Greater incentive."

"Determined to provide better way of living for wife and child."

"I must succeed in order to support my family."

"Family to work for."

"Study harder, must get a degree in order to make money to support family."

"Marriage gives a definite objective and motivation."

Married students also reported that they felt as though they were more settled and better adjusted because of marriage. Some typical comments, of the 49 who responded thus, were:

"More settled down."

"No chasing around nights."

"Mental attitude better for study."

"Settled down, more responsible."

"Great aid, personality more settled."

"More contented and settled."

"Stay at home nights, no desire to run around."



"Keep regular hours."

Another factor which married students stated was an asset was that of making good use of their time. Twenty-seven students were in this group. Typical comments were:

"More time spent studying, no loafing."

"No problem of eating, cleaning, etc., less time for social obligations."

"Save time by eating at home."

"Spend more time at home."

"Great deal less playing around."

Factors hindering college work.--Several areas of difficulty were readily identified, since there were numerous mentions made of them.

Commented upon the most often, as a factor hindering the married student, was lack of finances. Twenty-seven students felt that insufficient finances and worry over finances was their largest single problem. Typical responses were:

"Financial worries."

"Worry about finances."

"Lack of finances."

"Financial worries and responsibilities."

"High cost of living."

"Financial needs greater."

Married students as a group found housing conditions very poor and unsatisfactory. The following state-

ments are typical of the responses of 21 married students to this problem:

"In finding an apartment, it is sometimes necessary to go some distance from school, whereas single students are housed mostly on the campus."

"Poor study conditions due to poor housing."

"Poor study conditions at times; housing problem."

"Poor housing, high prices."

Twenty married students reported that they felt that their family interfered with their school work to some extent. The following are typical comments:

"Sickness of family."

"With wife also in school, I had to help with the housework, which tended to take time from my studies."

"Slight interference of family in study."

"Daughter requires some attention."

"Family sometimes disturbs study."

"Children make it difficult to study at times."

Eight married students felt that they were restricted in their ability to participate in extra-curricular activities. Some typical responses were:

"Restricts extra-curricular activities."

"Don't participate in activities."

"Restricts association with extra-curricular activities."

It is interesting to note that out of 82 married students to whom the interview form was administered, 25



did not give any response to the question concerning ways in which marriage had hindered them in their college work.

Briefly summarized, the data collected concerning the attitudes of married students toward the effect of marriage upon college marks can be grouped as follows:

Factors assisting the married student were increased motivation, more settled and better adjusted, and better utilization of time.

Factors hindering the married student were lack of finances, poor housing, family interference with study, and the restriction of their "ability" or opportunity to participate in extra-curricular activities.

## Chapter V

### DISCUSSION

The problem of this study, What effect does marriage have upon the academic achievement of entering college freshman?, will be discussed under the following headings:

1. Academic achievement.
2. Outside employment.
3. Credit hours carried.
4. Time spent in study.
5. Educational objectives.
6. Attitudes of married students.
7. Effect of marriage upon academic achievement.

#### Academic achievement

On the average, married students made significantly higher college grades than did single students. These findings are in disagreement with the findings of Popenoe (17), who commented on this problem prior to World War II. However, this author's comments appear to be based upon personal experiences with a small group of married students and not upon the results of valid research.

The college grades achieved by the married group of students were far above the minimum scholastic require-



ments for graduation. This evidence makes it possible for us to infer that the married student, who remains in college, has a better chance of graduating than does the single student.

#### Outside employment

An analysis of the data revealed no significant difference in the two groups of the sample in terms of the number of each group who were employed. Combining the above findings with those of Baker (1), who found evidences of a very low relationship between work load and grades, it appears that the factor of employment has little, if any, relationship to college marks.

The findings of this study indicate that married and single students are employed to approximately the same degree while attending college. It must be kept in mind that students included in this sample were veterans and that married veterans received a larger subsistence allowance than did single veterans. It is conceivable that if both groups were receiving the same subsistence allowance, or none at all, that the married students would be compelled to work more than the single students. This reasoning is based on the old adage that "two cannot live as cheaply as one." If more married students were compelled to work, one would not expect this factor to have a harmful effect upon

the academic achievement of the group, since Williamson (25) and Clark (2) reported that studies conducted by them revealed that working students made slightly better grades in college than did non-working students.

#### Credit hours carried

The average credit hour load carried by students of both groups of the sample was approximately 15 hours per quarter. This was about average for first quarter freshman who were veterans and, therefore, exempt from courses in physical education and military training.

Since the married and single students carried relatively the same academic load and any difference which did exist has not proven to be statistically significant from zero, it appears that married men are not compelled to carry lighter academic loads because of family responsibilities.

#### Hours spent in study

An analysis of the data concerning time per week spent in study produced no significant difference in the two groups of the sample. Since the married men achieved a significantly higher grade point average than the single men without studying to a greater degree, it would appear that these results concur with the findings of Baker (1), who stated that there were evidences of a very low relationship between total work load and college marks.



Interested individuals have stated to the writer that they were of the opinion that the married student did not have as much time to spend in study, since responsibilities to his family claimed a great deal of his attention. Since no significant difference has been found to exist, it is possible to assume that the single student has responsibilities to his fraternity, girl friend, parents, etc., which take time from his studies and, therefore, off-sets the time required of the married student by his family.

#### Educational objectives

The writer in his capacity as Director of Veterans Affairs has counseled with a great number of married and single veterans. Because of Veteran's Administration regulations, it has been necessary to interview each veteran who has desired to change his educational objective. From these experiences, the writer has noted what he feels to be a more determined attitude on the part of the married students toward the completion of the objective which he has chosen. This may be due in part to the desire of the married student to complete his college work as rapidly as possible so that he will be able to gain employment and establish a permanent home.

It is not inconceivable that a student who remains in the same educational objective is satisfied with his work and, therefore, apt to achieve higher marks. With

this in mind, data were analyzed concerning the manner in which married and single students selected and pursued their educational objectives.

Although a greater percentage of married men retained the same educational objective from high school to college enrollment, this difference was not statistically significant.

A comparison of the two groups as to previous work experience related to the educational objective selected in college revealed that the married group of the sample had a significantly greater percentage of students who had received this valuable experience.

The above findings might in some degree account for the significant difference in the two groups as to the number of students who changed their educational objective during the first year of college. The single students proved to be much less stable in the pursuit of their educational objectives, since nearly twice as many of this group changed their major field of study.

#### Attitudes of married students

Data concerning the attitudes of married students toward the effect of marriage upon academic achievement were analyzed. It is significant to note that with very few exceptions the married men expressed the belief that marriage was a definite asset to them as college students.



Twenty-five of this group did not give any response to the question concerning factors hindering them in college.

Married students identified several areas in which they were of the opinion that marriage affected their work in college. The majority of the responses concerning factors assisting the married student in his college work fell into three areas; increased drive or motivation to succeed because of family responsibilities, being more settled and better adjusted personally, and utilizing time more wisely. Responses concerning the factors handicapping the married student were grouped into four areas; lack of finances, poor housing, family interference with studies, and inability to participate in extra-curricular activities.

The above findings, concerning the factors assisting the married students, are in agreement with the findings of the Crowell-Collier Publishing Company (7), who published a veterans report in 1946 which stated that marriage adds materially to the seriousness of purpose of the married student.

It appears evident from the data which have been presented and the general attitude of the married student that the best possible inference which can be made, concerning the reason that married students do better than single students in college, is that married students are motivated to greater degree to succeed in their college work.

The findings of this study concerning the factors hindering the married students are significant. Since the two factors commented upon the most often were lack of finances and poor housing, it appears that married men who can successfully provide adequate financial resources and suitable housing for their families before enrolling in college will have an increased chance of achieving good college marks.

#### Effect of marriage upon academic achievement

It has been determined by the findings of this study that married and single students differ significantly only in three educational areas:

1. Married students achieve higher college marks than single students.
2. Married students have more work experience related to their educational objective.
3. Single students change their educational objectives more frequently.

By correlating these findings with the expressed attitudes of the married students, it is possible to infer that married students do significantly better college work because they are more serious of purpose and possess a higher degree of motivation to succeed.

#### Recommendations

1. On the basis of the results of this study, it



appears evident that counselors should assure the majority of married men that marriage is an asset and not a liability to an entering college freshman. This counseling should be given on an individual basis and should consider for each married man the factors which are applicable to his situation, especially those dealing with housing and finance.

2. College and university administrators should not only encourage married men to enroll in college, but they should assist them in every possible manner to attain their educational goal.

#### Suggestions for further study

Future studies should seek the answers to the following questions:

1. Is there a significant difference in the number of married students who drop out of school as compared to single students?
2. Do family adjustment problems increase or decrease with length of time spent in college?
3. To what extent are the findings of this study applicable to married students who are not veterans?
4. How does the divorce rate among married students in college compare with national statistics on the divorce rate of a comparable group?

## Chapter VI

## SUMMARY

In order to provide data concerning the comparative academic achievement of married and single students, an investigation was made of 200 entering college freshmen who enrolled at Colorado Agricultural and Mechanical College during the fall quarter of the school year 1946-47. These students were divided into equal groups of 100, classified according to their marital status. The two groups were equated as to age, intelligence, sex, and military service.

The data were obtained by the use of two methods, which were as follows:

1. An analysis of the records of the college registrar, the college testing bureau, college veterans affairs office, and the college student affairs office to obtain data relative to the enrollment, college achievement, test scores, military service, and age.

2. The administration of a Personal Interview Form to 154 students of the sample to obtain information pertaining to the selection of educational objectives, employment, time spent in study, and atti-



tudes of married students toward the effect of marriage on their college achievement.

### Significant findings

The results of this study indicate that married students differ significantly from single students in three educational areas. They are as follows:

1. Married students achieve higher college marks than single students.
2. Married students have more work experience related to their educational objective.
3. Single students change their educational objectives more frequently.

Poor housing and lack of finances appear to be the factors which handicap the married student the greatest. Those married students who provide themselves with adequate financial resources and suitable housing prior to enrollment will insure for themselves a better chance of succeeding in college.

By correlating the findings of this study with the expressed attitudes of the married students, it is possible to infer that married students do significantly better college work because they are more serious of purpose and possess a high degree of motivation to succeed.

## APPENDIX



## APPENDIX TABLE OF CONTENTS

<u>Appendix</u>		<u>Page</u>
A	SAMPLE OF FORM OF "PERSONAL INTERVIEW FORM" . . . . .	63
B	RESPONSES OF 154 MARRIED AND SINGLE STUDENTS TO "PERSONAL INTERVIEW FORM" . . . . .	66
C	MASTER DATA SHEET . . . . .	119

Appendix A.--SAMPLE OF FORM OF  
"PERSONAL INTERVIEW FORM"



PERSONAL INTERVIEW FORM

64

1. What did you think you wanted to be when you were graduated from high school?
2. What were your objectives when you enrolled at Colorado A & M College?
3. When did you select these objectives?
4. Why did you select these objectives?
5. What previous experience related to your objective did you have?

6. What changes have you made in your objectives?

65

7. Why did you make these changes?

8. During fall quarter 1946, what was the average number of hours weekly that you were employed?

9. During fall quarter 1946, what was the average number of hours weekly that you spent in study?

TO BE ANSWERED BY MARRIED STUDENTS ONLY

1. In what ways has being married aided you in your college work?

2. In what ways has being married hindered you in your college work?



Appendix B.--RESPONSES OF 154  
MARRIED AND SINGLE STUDENTS  
TO "PERSONAL INTERVIEW FORM"

## RESPONSE TO INTERVIEW FORM

## Married Students

## Case No. 1

1-Dentist.

2-To become doctor of Veterinary Medicine.

3-While in the service.

4-I am very fond of animals, and enjoy caring for them.

5-With animals on the home farm.

6-Have decided to farm rather than be a veterinarian.

7-Overcrowded conditions of the colleges prevent entrance into professional schools.

M1-Being married has caused me to be more serious as far as studying is concerned. Personally, I also believe that living costs are comparatively less for married students than single students.

M2-In finding an apartment sometimes it is necessary to go some some distance from school, whereas single students are housed mostly on Campus.

## Case No. 2 No response

## Case No. 3

1-Career as army officer.

2-Forestry.

3-While in the service.

4-Upon high school completion worked two years in lumbering. Field opening up on home community for foresters.

5-Lumbering and timbering.

6-General Science with hope of some forestry work.

7-Grades were not high enough.

---

When no response was indicated the item has been omitted.



M1-More settled down; don't waste as much time; study harder due to feeling of responsibility.

M2-Poor housing.

Case No. 4. No response.

Case No. 5

1-Veterinarian.

2-Pre-Veterinary.

3-Ten years ago.

4-Raised on a farm. I have owned and raised horses for several years.

5-Same as above.

6-Changed to Agriculture.

7-Couldn't get in the field I had chosen.

M1-No chasing around nights; have to pick a field to make a good living for my family; my wife is a school teacher.

Case No. 6

1-Coaching career.

2-Veterinarian.

3-Thought a little about it in high school, but it became definite objective while in service.

4-Raised on a dairy farm; always liked animals; wanted work which entailed work with animals; coaching is underpaid and unstable.

5-Worked with animals all of life while on dairy farm.

6-If not in vet school by end of this year will finish up in animal husbandry.

7-Only if priority system prevents vet school entry.

M1-More conscious of responsibility to finish school; settled down.

M2-Living expenses higher; more responsibilities to look after.

## Case No. 7

1-Veterinarian.

2-Veterinarian.

3-High school.

4-Raised in farm environment; family involved in feeding cattle.

5-Work at feeding and general farm work.

M1-Yes; keep person settled; realize responsibilities.

M2-Housing and financial worries; sickness of family, etc.

## Case No. 8

1-Thought of Army as career.

2-Forestry.

3-While in service.

4-Outdoor type of job; discussed this type of job with a friend.

5-Summer work in forest service.

M1-Married when entered college; something to work for; "Responsibility makes school a job instead of a game."

M2-Financial worries.

## Case No. 9

1-Civil Engineer.

2-Forestry.

3-After one quarter of college.

4-Felt more suited for forestry after a quarters instruction to engineer.

5-Observation, hobbies in natural sciences, and reading.

M1-Settled down; easier to get at studies; mental attitude better for study; wife in school and both can share college experiences.

M2-With both in school I have to help with the housework which tends to take time from my studies, however this is offset by advantages.



## Case No. 10

1-Post office department.

2-Forestry.

3-In service. Talked with forester.

4-Talked with forester.

M1-Wife working helps financial status; Settled down; more responsible

## Case No. 11

1-Rancher.

2-To become a Veterinarian.

3-About a year before enrolling in college.

4-Because of a need for such and also as a means to getting a ranch of my own.

5-None, except as a ranch hand in ranch work.

6-I have given up veterinary and am renting a small ranch for myself

7-Because I would have had to wait a year and possibly two even if grades were high to get into the Pre-Vet course according to my counsellor. Also I found it almost impossible to get by on the ninety dollars and what I could earn.

M1-As my wife was a teacher at one time she could help me plan my work and lessons. Also gave me more to work for and I believe I studied more than if I were single.

M2-None that I know of.

## Case No. 12

2-Pre-Vet.

3-During service

4-Family interested in veterinary medicine.

5-Raised on farm.

M1-Great aid; personality more settled; motivation greater, don't give up as easily.

## Case No. 13

1-Veterinarian.

2-Veterinarian.

3-High School.

4-Past experience; interesting vocation; interesting in science.

5-Farm experience; father-in-law Veterinarian; experiences with rare horses.

6-Can't get into vet school; may take Horticulture or Optometry.

7-School filled.

M1-Responsibilities increase motivation; settled down.

M2-Financial difficulties; worry over responsibilities.

Case No. 14 No response.

Case No. 15

1-Forest ranger.

2-Forestry.

3-High School.

4-Work for Forest Service 1942

5-Same as above.

M1-More serious outlook toward education; more time studying.

M2-Financial responsibilities.

Case No. 16

1-Veterinary Medicine.

2-Veterinarian.

3-After graduation from High School.

4-All work experience and interest in this field.

5-Work on cattle ranch; Armour and Company; Veterinarian Assistant.

6-Animal Husbandry because of vet enrollment.

7-Not admitted to vet school.



M1-Responsibilities increase due to motivation(keep nose to grind stone); save time on meals; better food.

M2-Worry about finances; slight interference of family in study; housing worry.

#### Case No. 17

1-Engineering

2-Pre-Vet.

3-While in service.

4-Decided that I liked outdoor life better.

5-Raised on ranch; worked with animals.

6-Animal Husbandry.

7-Associated field.

M1-Studies harder.

M2-Financial worries; housing worries; slight interference by family; outside employment.

#### Case No. 18

1-Army as career.

2-Vet Medicine.

3-During war.

4-Talked with two doctors that encouraged me; felt I would like Vet medicine better.

5-Worked on large poultry farms and dairies; race track.

M1-Feeling of responsibility more settled; greater incentive.

#### Case No. 19

1-Veterinarian.

2-Veterinarian.

3-I selected the objective while I was in High School.

4-I have a very good friend who is a veterinarian whom I help in the summer.

5-Summer work.

M1-I feel that I make better use of my time since I stay home in the evenings; I feel that I must succeed in order to support my family.

Case No. 20

1-Forester.

2-Forestry.

3-At the time of admittance to school of Forestry.

4-Forestry appealed to me because of the outdoor work.

M1-Enabled me to be more direct in making decisions and selection of specific objectives.

M2-Perhaps a contributing factor to lower grades now received.

Case No. 21 No response.

Case No. 22 No response.

Case No. 23

1-Coach.

2-Coach.

3-End of high school.

4-Active in High School athletics; experience in service.

5-Athletic instructor in service; player in high school and service.

M1-Motivation greater.

M2-Financial, housing, time for family and work; worry.

Case No. 24

1-Farmer.

2-Animal Husbandry.



3-While in the service.

4-Decided that a person needs a college education in order to succeed.

5-Working on ranch.

M1-Less time spent in social life, dances, fraternities, etc.

M2-Worry about housing and money.

#### Case No. 25

2-Veterinary

3-After high school.

4-Agricultural background; farm.

5-Farm work

M1-More time to study; settled down; motivation.

#### Case No. 26

1-In service.

2-Engineer.

3-While in service.

4-Talking with brother and others who were engineers.

M1-Settled down; no distracting afflictions with extracurricular activities.

M2-Daughter requires some attention.

#### Case NO. 27

1-Vet Medicine.

2-Vet Medicine.

3-During Service.

4-Enjoyed working with animals while overseas.

5-When twelve through sixteen years worked around race track.

M1-Settled down; easier to study.

Case No. 28

1-Forester.

2-Forestry.

3-Senior year in high school.

4-I had heard that this was a good field and also of men who had made good in it; father's influence; I like outdoor work and was interested in conservation.

5-Father took correspondence course in forestry.

6-Botany and plant pathology.

7-Schools overcrowded with forestry students; field might be too full in near future; friend who had graduated had difficulty in getting desirable position.

M1-Feeling of responsibility; settled down.

Case No. 29

1-Vet Medicine.

2-Vet Medicine.

3-Through High School.

4-Worked around stock and liked it.

5-Above.

M1-Settled down.

M2-Financial difficulty; housing difficult.

Case No. 30 No response

Case No. 31

1-Teacher of Industrial Arts or factory.

2-Industrial Arts.



3-Between service and entrance in college.

4-Like the work; ability in this work.

M1-More contented and settled.

M2-Financial worries.

Case No. 32

1-Forestry.

2-Civil Engineer.

3-While in service.

4-Like outside work; tangible evidence of progress.

M1-Settled down; more time for studies.

M2-Restricts extracurricular activities.

Case No. 33

1-Mining Engineer.

2-Chemistry major.

3-While in service.

4-Decided I didn't like mining engineering as occupation; liked chemistry.

5-Chemistry in high school and college; no experience in teaching phase.

M1-Settled down.

M2-Living conditions.

Case No. 34

1-Engineer.

2-Engineering.

3-High school.

4-Worked for Highway department.

5-Above.

M1-Yes; stay home at night; no desire to run around; family to work for.

M2-Poor study condition due to poor housing.

Case No. 35

1-Didn't have anything definite.

2-General Science.

3-Realized that everyone needs a college education; while in service.

4-Same as above.

M1-Study harder, must get a degree in order to make enough money to support family.

M2-Lack of finances; family sometimes disturbs study.

Case No. 36 No response.

Case No. 37

1-No idea

2-Forestry

3-During Service

4-Liked outdoor work and when he learned about G I Bill decided to go to college.

M1-More responsibility; settled down; more interest in getting out and to work.

Case No. 38

1-Vet Medicine.

2-Vet Medicine.

3-High school.

4-Contact with animals

5-Around animals a great deal; own some.



6-Business Administration now.

7-Priority eliminated me for vet school.

M1-Responsibility increased; settled down; wife college graduate, assisted in studies.

M2-Financial worries.

Case No. 39

1-Perhaps school teacher.

2-Vocational Agriculture.

3-High school.

4-Grew up on farm associated with animals; didn't care to farm but wanted something along this line.

5-Above.

6-Now in Vet Medicine.

7-Didn't want to teach(didn't like it, no pay); Vet Medicine would be working with animals.

M1-Regular hours; settled down.

Case No. 40

1-Engineer.

2-Engineer.

3-During High school.

4-Liked science in high school..

M1-More drive, settled down, no social obligations.

Case No. 41

1-Agronomy.

2-Agronomy.

3-High school.

4-Background; interest in work of agronomists.

5-Raised on farm; weed control work for county.

M1-Yes; conscious of responsibility to achieve goal; motivation greater; encouragement of wife.

M2-Devote some time to wife which takes time from studies.

Case No. 42

1-No definite ideas.

2-Forestry.

3-At time of entrance.

4-thinks he will like that phase of forestry; likes outdoor life.

5-Last summer between nine month terms.

M1-More serious attitude; more determined to finish because of added responsibility.

Case No. 43

1-Mechanical Engineer.

2-Light Construction.

3-Summer before entrance into college.

4-Like work; observation from study of field.

M1-Yes; keeps from running around; more time for study; more settled; more adjusted.

M2-Poor study condition at times; housing problem.

Case No. 44

1-No idea.

2-Veterinary Medicine.

3-After high school.

4-Interest in animals.

5-Summer work with veterinarian.



M1-Wife helps by working; spend more time at home; desire to succeed is greater.

M2-Housing difficulty.

Case No. 45

1-Engineer.

2-Engineer.

3-High school.

4-Mechanically minded; interested.

6-Forestry.

7-Interest natural science and out doors; no work experience.

M1-Motivation due to responsibility; not running around; wife working.

M2-Doesn't participate in activities.

Case No. 46

1-Farmer(livestock).

2-Vet Medicine.

3-While in service(five years after high school graduation).

4-Interested in livestock; interested in becoming a doctor; combined the two and arrived at Vet Medicine.

5-Raised on farm; associated with animals.

6-Vocational Education.

7-Priority system eliminated Vet Medicine training.

M1-Settled down.

M2-Restricts association with extracurricular activities.

Case No. 47

1-Chemical Engineer.

2-Chemistry.

3-While in army

4-Likes chemistry and research; talked with teachers in high school

5-Chemistry classes in high school and junior college.

6-Returning to farm in April.

7-Finances and death in family.

M1-Settled down; receives encouragement from wife; If wife can work it is an advantage financially.

Case No. 48 No response

Case No. 49

1-Teacher and Coach.

2-Civil Engineering

3-While in service.

4-Service experience.

5-Construction battalion; carpenter.

M1-No running around as much; greater motivation; wife works.

M2-Housing worries.

Case No. 50

1-Army officer

2-Economics

3-After being discharged from service.

4-Desire to go into business.

5-Work as salesman during spare time

M1-Much more settled, know what has to be done and do it.

M2-Family detract slightly while studying.

Case No. 51

1-Electrical Engineer.

2-Doctor of Vet Medicine.



3-After discharge from service.

4-Shortage of Veterinarians and I think I would like that type of work; it should provide a comfortable living.

5-Lived on a farm.

M1-Encouragement and assistance in English from wife; determined to provide better way of living for wife and child.

M2-Financial worries and responsibilities.

Case No. 52

1-Little definite thought.

2-Vet Medicine.

3-While in service.

4-Held fascination.

5-Raised on a cattle farm.

M1-More privacy; more settled and satisfied; companionship.

M2-Lack of help when problems arise.

Case No. 53

1-Electrical engineer.

2-Electrical engineer.

3-While in high school.

4-Have always been interested in motors and electricity.

5-Work in service with electronics.

M1-Study habits improved; more important to succeed because of the family.

Case No. 54

1-No definite objective.

2-Industrial Arts.

3-Summer before entering college.

4-Like wood working; like children.

5-High school manual arts training; training in Trade School.

M1-Tied down to studies; definite motivation because of family responsibility.

M2-Worry over finances and family responsibilities.

#### Case No. 55

1-Forestry.

2-Forestry.

3-High school.

4-Like outdoors and mountains.

5-Reading only.

M1-Settled down; easier to study because of a purpose.

M2-Financial worries; children make it difficult to study at times.

#### Case No. 56

2-Electrical Engineer.

3-In service.

4-Working with radio in service.

5-Working with radio in service; three months schooling in electrical work before service.

M1-No running around; more time studying; recognize responsibilities; no loafing.

M2-Child makes it difficult to study; housing problem.

#### Case No. 57

1-Coach.

2-Pre-Veterinary

3-When discharged from service.

4-Background; liked animals; family desire.



5-Previous work on ranch.

6-Animal Husbandry

7-Not admitted to vet school; this is closest to veterinary.

M2-Additional responsibilities; financial responsibilities; unsettled condition in family; children disturbing.

Case No. 58

1-Forester

2-Engineering

3-Between high school and service.

4-Interest in construction work and income.

5-Work for construction companies for two years; Army engineers for three and a half years.

M1-No problem of eating, cleaning, etc.; less time for social obligations; greater motivation.

M2-Financial worries.

Case No. 59

1-Veterinarian.

2-Veterinary.

3-High school.

4-Agricultural background; agriculture in high school.

5-Work with veterinarian.

6-Animal Husbandry

7-Not accepted by veterinary.

M1-Save time by eating at home; wife works.

M2-Housing problem.

Case No. 60 No response

## Case No. 61

1-Doctor

2-Forestry

3-While working with Park service in summer.

4-Like outdoor work.

5-Work with Park Service.

M1-Wife encourages me to study; spend more time at home.

M2-Poor housing; high prices.

## Case No. 62 No response

## Case No. 63

1-Draftsman in steel plant.

2-Forestry.

3-While in service after discussing with forester.

4-After discussing with forester.

M1-Gave a definite objective and motivation; more settled, therefore more effort.

M2-Less time for study; financial worries.

## Case No. 64

1-Rancher.

2-Animal Husbandry.

3-While working at home.

4-Parents own a large ranch.

5-Work on ranch.

M1-Wife assists with studies, offers encouragement; more settled.



## Case No. 65

- 1-No plans; job in ice-cream factory.
- 2-Forestry.
- 3-While in service.
- 4-Father naturalist.
- 5-Association with father's work.
- 6-Game Management.
- 7-Like game management better.
- M1-Incentive and responsibility; settled down.
- M2-Part time work interferes with studies; children take time from studying.

## Case No. 66 No response

## Case No. 67

- 1-Veterinary Medicine.
- 2-Veterinary.
- 3-High school.
- 4-Interested in animals; field looked good.
- 5-Work on farms.
- M1-Motivated more strongly to see goal; good environment for study; wife insisted on return to college.

## Case No. 68

- 1-Farmer.
- 2-Agronomy.
- 3-While in high school.
- 4-Talked with several county agents who recommended agronomy.
- 5-Work on parents' farm.

M1-More desire to succeed because of responsibilities.

M2-Poor housing; financial difficulties.

Case No. 69

1-Civil engineer.

2-Veterinary Medicine.

3-Just before release from service.

4-Had experience with animals; lived on farm all my life.

5-Same as above.

6-Change to agriculture but still trying to get in vet school.

7-Scholastic.

M1-More settled; greater desire to become established; easier to study because not running around.

M2-Poor housing.

Case No. 70

1-No definite choice of vocation.

2-Veterinary Medicine.

3-Just before enrollment.

4-Shortage of veterinarians.

6-General Agriculture.

7-Didn't make grade for Veterinary course.

M1-Wife working relieves financial worries; great deal less playing around.

M2-Very little participation in school activities.

Case No. 71

2-Horticulture.

3-In service.

4-Interest in field.



5-Work in field before and after service.

M1-Keeps you at home; have to make good because of responsibilities.

Case No. 72

1-Rancher.

2-Successful rancher.

3-Grew up with these ideas.

4-The only thing with which I have had any experience.

5-Raised on a ranch.

6-Quit trying to further education.

7-Financially unable to attend school.

Case No. 73 No response

Case No. 74 No response

Case No. 75

1-Possibly life Army service.

2-Forestry.

3-In service.

4-Other servicemen suggested Forestry; liked outside work.

6-Transfer to Economics--Psychology.

7-Vocational guidance indicated; social science, physical science hard.

M1-At home more; not running around; motivation greater;

M2-Less social contacts.; housing problems; work more.

Case No. 76

1-Industrial forestry.

2-Forestry.

3-During Service decided definitely.

4-Lived in country; vacations in Maine where paper for the newspaper he worked for was made.

5-Only observation.

M1-More conscientious; assistance in making decision to continue.

M2-Limits extracurricular activities.

#### Case No. 77

1-Veterinarian.

2-Agriculture.

3-High school.

4-Raised on a farm.

5-Same as above.

6-Physical Education.

7-Like children and sports; felt could do more for myself and others; happier doing what he liked.

M1-Received encouragement; settled down; more responsibility.

M2-Restricted extracurricular activities; family detracts from study.

#### Case No. 78

1-Forester.

2-Forestry.

3-At the age of twelve.

4-Outdoor work desirable; knew foresters.

5-Boy Scout—reseeding and replanting.

6-Took aptitude tests when scholastic standing low; changed to sociology.

7-Advice of counselors and my interests tend to fall into this field.



M1-More responsibility and settled down.

M2-Housing conditions poor; study habits interrupted by family;  
family takes precedence over school work.

Case No. 79

1-Stockman.

2-Veterinary.

3-In the service.

4-Have always had work with livestock.

5-Practical experience.

6-Discontinued idea.

7-Crowded condition of colleges and finances.

M1-Belonging to a family; someone to help with study.

M2-High cost of living.

Case No. 80 No response.

Case No. 81 No response.

Case No. 82

1-Mechanic.

2-Forestry.

3-While working as mechanic following high school graduation.

4-Liked outdoor life; had received some contact with this type of  
work.

5-Vacation contact and reading.

Case No. 83

1-Veterinarian.

2-Pre-Veterinary.

3-High school.

4-Like work with animals.

5-Work with Veterinarian.

M1-More settled; definite goal; can't afford to waste time.

M2-Housing difficulties.

Case No. 84 No response

Case No. 85

1-Engineer.

2-Engineering.

3-High school.

4-Have always liked to work with cars or motors.

5-Work with cars, motors, etc.

M1-More responsible; more settled.

M2-Housing and financial worries.

Case No. 86

1-Rancher.

2-Veterinarian Medicine.

3-After release from service.

4-Combine ranching and veterinarian in effort to secure good income quickly.

5-Work on ranch five years.

M1-Settled down; saves time.

Case NO. 87

1-Veterinary Medicine.

2-Veterinary Medicine.

3-At high school graduation.

4-Working with veterinarian during senior of high school and following release from service.



5-Work with Veterinarian.

M1-Wife working makes added income and allows time for study; more settled.

Case No. 88

1-Veterinarian.

2-Veterinarian.

3-High school.

4-Interest in animals and that type of work.

5-Stock judging in high school; work with agriculture instructor; work with several veterinarians.

M1-Given an incentive to work; an ambition to secure work that would support family; motivation; wife's encouragement.

M2-Worry over finances; children interfere with study; must aid with care of children.

Case No. 89 No response.

Case No. 90

1-Farming.

2-Veterinary.

3-In medics in service.

4-Liked animals and likes medicine.

5-On farm and medics in service.

6-Animal Husbandry.

7-Eliminated from the school because of veterinarian priority.

M1-Settled down; more to work for.

Case No. 91

1-Teacher.

2-General Science.

3-High school.

4-I believe that teaching is an honorable profession and salaries are improving.

5-Teaching in Boy Scout work.

M1-Marriage makes it easier to budget time properly; wife helps with studies.

#### Case No. 92

1-Aviator

2-Forestry.

3-While in service.

4-Previous work experience in CCC.

5-Lumber Company and CCC

M1-More responsibility; more conscientious in work.

M2-Financial needs greater; housing poor; not sufficient time for family.

#### Case No. 93

1-Flyer.

2-Forestry.

3-During the service.

4-Lived in mountains.

M1-Wife working, helps financial condition.

M2-Family takes some time from study.

#### Case No. 94 No response

#### Case No. 95

1-Engineer.

2-Animal Husbandry



3-After release from service.

4-Like animals and this type of work.

5-While in Africa worked with dairy herd, race horses, and polo ponies.

M1-More stable.

M2-Some social obligations that tend to bother; child bothers little.

#### Case No. 96

1-Possibly farming.

2-Forestry.

3-In service.

4-Appeal of outdoor life.

6-Animal Husbandry.

7-Didn't care for forestry.

M1-More settled, less financial worry—wife working.

#### Case No. 97

1-Construction

2-Civil Engineering.

3-In the service.

4-In the engineers in the service.

5-Army work.

M1-More settled; work harder; wife helps with studies.

#### Case No. 98

1-Construction Foreman—Carpenter.

2-Civil Engineer.

3-Upon discharge from discharge from army with disability which included the field construction foreman.

- 1-Nearest field to original objective.
- 5-Maintenance work as a child; carpenter and construction work.
- 6-Sociology--Industrial personnel work related to original objective.
- 7-Guidance counseling indicates lack of ability in engineering.
- M1-Assistance from wife in school work - wife school teacher; save more money; care in time of illness; child is asset as moral uplift; stimulus to study, to realize responsibilities.
- M2-Inferior feeling because of wife's ability.

## Case No. 99

- 1-Rancher.
- 2-Veterinary Medicine.
- 3-Always wanted to be a rancher.
- 4-Grew up on a ranch; like this work.
- 5-Above.
- 6-Animal Husbandry.
- 7-No background for veterinary medicine.
- M1-Settled down; more responsibility.

## Case No. 100

- 1-Undecided.
- 2-Engineering.
- 3-While in service.
- 4-Interest in mechanics and design.
- 5-Army technical schools.
- 6-Postponement of education until living expenses are less.
- 7-Financial difficulties.
- M1-More settled life.
- M2-Inadequate finances caused termination of schooling for present.



## Single Students

## Case No. 1

- 1-Forest Ranger.
- 2-Forestry.
- 3-Selected at different times; Wanted to be a Forest Ranger since grade school; decided on college after release from service.
- 4-Believe that a college education is necessary.
- 5-Helped fight forest fires during the war when there were not enough workers.
- 6-Changed major.
- 7-College competition is harder than expected and failed to get into Forestry.

## Case No. 2

- 1-Forest Ranger or Coach.
- 2-Forestry.
- 3-While in the service.
- 4-Liked that kind of life.
- 5-Worked for Forest Service during summer and spent lot of time in mountains.
- 6-Coaching.
- 7-More jobs open in the coaching field.

## Case No. 3 No response

## Case No. 4

- 1-Air Force pilot.
- 2-Landscape designing.
- 3-After release from service.
- 4-Thought I would like the work; Wanted a business of my own; was a good opening in my home town.

## Case No. 5

- 1-Engineer.
- 2-Civil Engineering.
- 3-High school.
- 4-Like outdoor work; like to work with machines.
- 5-Summer work with construction outfit.
- 6-Changed to General Science.
- 7-Poor background in mathematics.

## Case No. 6

- 1-Veterinarian.
- 2-Pre-Veterinary.
- 3-High school.
- 4-Like to work with animals.
- 5-Work on ranch with animals.
- 6-Animal Husbandry.
- 7-Did not have a high enough grade average to get into veterinary.

## Case No. 7

- 1-Still undecided but favored engineering.
- 2-Electrical Engineer.
- 3-While in service.
- 4-Felt these objectives essential to advancement in the world; would be happy in that type of work.
- 5-No practical experience; only the courses in electricity.

## Case No. 8 No response

## Case No. 9

- 1-Didn't know.



2-Forestry.

3-While in the service.

4-Very much interested in outdoor work.

Case No. 10

1-Forest Ranger or Rancher.

2-Forestry.

3-High school and in service.

4-Do not like inside work; wanted more or less to be own boss.

5-Raised on farms; spent summer vacations working on ranches.

6-Animal Husbandry.

7-Low grades; competition was too keen in forestry.

Case No. 11

1-Interested in Criminology.

2-Animal Production.

3-In the service.

4-Logical contrast to the type of life in service. I had had enough killing and abnormal living to not want to return to Police work.

5-Worked around cattle and horses in the summer when in school; took job on ranch after release from service.

6-Might like to get masters in Agricultural Journalism.

7-Realized that too much money was required to acquire ranch property and stock.

Case No. 12 No response.

Case No. 13

1-Mining Engineer.

2-Veterinary Medicine.

3-Before joining the army.

4-Deep interest in the farm; veterinary medicine seemed to me one way of realizing my interest in a profitable way.

5-Had always lived on a farm.

6-Animal Husbandry.

7-Couldn't get into veterinary school and this offered the variety of courses best suited to learn those things most useful on a farm which I hope some day to own.

Case No. 14 No response

Case No. 15

1-Building Contractor.

2-Civil Engineering.

3-While in the Army.

4-Could relate carpentry experience to it and felt I would like the work; also had a good offer to get into the business from a friend.

5-Worked as a carpenter's apprentice after graduation from high school.

6-Trades - Industrial Education.

7-Don't feel I could meet the requirements of civil engineer--having trouble with mathematics; have the necessary prerequisites to teach carpentry.

Case No. 16 No response

Case No. 17

1-Architectural Engineer.

2-Animal Husbandry.

3-When in service.

4-Like cattle and working with them; brother and I felt we could work together.

Case No. 18

1-Did not know.



- 2-Civil Engineering.
- 3-While in service.
- 4-Thought that was what I wanted.
- 6-Psychology.
- 7-Was not inclined to engineering; was failing.

## Case No. 19

- 1-Veterinarian.
- 2-Veterinarian.
- 3-In grade school.
- 4-Have wanted to ever since grade school.
- 5-Worked for nineteen months in a packing house; took course in animal diseases and breeding when employed there; gained information from the veterinarians employed there; correspondence course kept me in closer to the goal I had set.
- 6-Slight change--Have chosen to become a Doctor of Veterinary surgery.
- 7-Have always felt that I could do well using my hands; good grades in hand dexterity tests.

## Case No. 20

- 1-Had no idea.
- 2-Obtain a degree.
- 3-During the service.
- 4-Interested in the field I was in and felt I could better myself; men with training of a special kind commanded more respect from others and were promoted faster.
- 5-One and one-half years practical experience in telephone central-office equipment installation; six months school in army and two years practical experience in field installation of carrier systems.
- 6-Main objective to make a living.
- 7-Forced to by circumstances.

Case No. 21 No response

Case No. 22 No response

Case No. 23

- 1-Wanted to be connected with gasoline engines in some way.
- 2-Mechanical Engineering.
- 3-While in the service.
- 4-Was with Navy Construction troops and received a fine practical application of different phases of engineering and wanted to follow them up with the technical side.
- 5-Four years with the Navy Construction troops; last summer with a construction company; driving trucks.
- 6-Thinking of changing to Light Construction and Marketing Major.
- 7-Unable to make grades; technical field of engineering was not going to help me in the least; wanted something in the field of business.

Case No. 24

- 1-Pilot in Army Air Corp.
- 2-Forestry.
- 3-After discharge from service.
- 4-Interested in outdoor work of this type, and the preservation of wild life.
- 5-Quit college to work for Forest Service.
- 7-Practical training I am receiving here is excellent basic training for National Park Service which I want.

Case No. 25 No response

Case No. 26

- 1-Business of my own in some phase of Mechanical Engineering.
- 2-Mechanical Engineering.
- 3-About eight years ago.



4-Dislike taking a great many orders; wish to reap maximum benefit from my own efforts.

5-Worked in University Engineering Laboratories as an assistant instructor and have held other Engineering positions; own my business now--being operated by partner now.

#### Case No. 27

1-Forest Ranger or Park Service.

2-No definite objective in mind.

3-Decided partially by the testing bureau last spring quarter.

4-The testing decided the course I was most interested in and adapted to--that of a high school teacher of Social Sciences.

6-Field of guidance and counseling.

7-I have always had an interest in testing, other peoples problems and interviewing so I believe I have found my final goal in this field.

#### Case No. 28

1-Army flyer.

2-General Science.

3-Upon enrollment in college.

4-Desire to get a general college degree.

6-Have decided to be a teacher.

7-Teaching field is not crowded like other fields.

#### Case No. 29

1-Electrical Engineer.

2-Electrical Engineering.

3-Just before entering the service.

4-Because I liked to work with electricity and radio.

5-Only experience before entering service was reading and applying the theory; after entering service received training in radio and radar.

Case No. 30 No response

Case No. 31

- 1-Planned on entering college.
- 2-Veterinary Medicine.
- 3-Since first entering high school.
- 4-Was familiar with the work, as my father is a veterinarian, and I knew I would enjoy it.
- 5-I have worked with my father and other veterinarians since I was old enough to get a job.
- 6-Have prepared to take up another field in agriculture if I am not accepted for veterinarian work.
- 7-A person has to get some education in the field he likes, and he can't afford to go to school forever.

Case No. 32

- 1-Join the navy for two years and return to college.
- 2-General Agriculture.
- 3-During the service and after being home for some time.
- 4-To learn more about farming and livestock.
- 5-Ranch at home.

Case No. 33

- 1-No definite idea except felt sure that I would be in service.
- 2-Forestry.
- 3-Just before discharge.
- 4-Liked woods and mountains; have horsemanship; am a good shot; skiing with ski troops; general mountaineering and woodsmanship.
- 6-Have decided to leave school.
- 7-Not prepared for college work.



- 1-Engineer.
- 2-Light Construction and Marketing.
- 3-After leaving the service.
- 4-Construction business has good future.
- 5-Worked in lumber yard and with construction outfit.

Case No. 35

- 1-Veterinarian.
- 2-Veterinary Medicine.
- 3-While in high school.
- 4-Like to work with animals.
- 5-Have lived and worked on a ranch all of my life.
- 6-Animal Husbandry.
- 7-Did not have high enough grades to get into Veterinary school.

Case No. 36 No response.

Case No. 37

- 1-Auto mechanic.
- 2-Mechanical Engineering.
- 3-While in the service.
- 4-Because of army experience in a machine shop and interest in engines.
- 5-Worked with cars all of my life.
- 6-Changed to Light Construction and Marketing.
- 7-Too much math in engineering.

Case No. 38

- 2-Forestry.

3-While in service.

4-Because I wanted outside work.

6-Vocational Agriculture.

7-Like association with kids; have a nice set up to farm on the side; subject is interesting; believe there is a good future in it.

Case No. 39

1-Teacher.

2-Sociology.

3-Just before enrolling in college.

4-Think I would like this type of work.

Case No. 40

1-Veterinarian.

2-Veterinary Medicine.

3-In high school.

4-Because of experiences while on the farm--witnessed the death of a large number of animals during that period on the farm, the outbreak of equine encephalitis crystallized the desire to become a veterinarian.

5-Frequent periods of time spent on a farm in the middle-west.

Case No. 41

1-Rancher or dairy farmer.

2-Veterinary Medicine.

3-Just before discharge from service after realizing the advantages of the G.I. Bill.

4-Interest in livestock; need for the services of a veterinarian in our locality.

5-Have worked with cattle and horses as long as I have been old enough to work.



6-Dairy Manufacture.

7-Unable to get into Veterinary Medicine but interest is probably equally as great as in Veterinary Medicine.

Case No 42

1-Salesman.

2-Forestry.

3-When discharged from service.

4-Outdoor work is much more interesting.

5-Boy Scout work and work with lumber company.

6-Arts and Science.

7-Forestry course is too technical.

Case No. 43 No response

Case No. 44

1-Rancher.

2-Animal Husbandry.

3-While just a boy on the ranch.

4-Because I live on a ranch.

5-Have lived on ranch all my life.

Case No. 45

1-Undecided but interest trend was toward forestry and game management.

2-Forestry.

3-Two years before entering college.

4-Interest in forestry and conservation of wild life.

5-Discontinued education to work in the Building Trade.

7-Failed to make Forestry class.

Case No. 46

2-Agriculture.

3-Upon return from army.

4-Farm experience.

5-Farm experience.

Case No. 47

1-Army Flyer.

2-Engineer.

3-While in service.

4-Because of army work in engineering.

5-Army work in field of engineering.

6-General Science.

7-Poor math background.

Case No. 48

Case No. 49

2-Agriculture.

3-After leaving service talked with friend in the Department of Agriculture.

4-Think I would like work in Soil Conservation because it has a great future.

5-General farm and ranch work at home.

Case No. 50

1-Possibly some kind of conservation work.

2-Forestry.



3-Before discharge from service.

4-This is the type of work in which I am interested and would like to follow.

5-Work that I have had in the woods and in State game lands; also for State in conservation work.

6-None yet, but if I do it will be to Horticulture.

7-Have taken an interest in the course in Horticulture which I have had.

Case No. 51

1-Didn't know—but wanted to attend college.

2-Light Construction and Marketing.

3-Day before registration.

4-Because I am good in mathematics and felt the course would be very interesting.

5-Electrical work in Navy.

6-Animal Husbandry.

7-Lost interest in mathematics and the course I was taking; felt I knew more about Animal Husbandry.

Case No. 52

1-Commercial Aviator.

2-Economics with slight emphasis on Agriculture and ranch management.

3-Just prior to discharge from service.

4-Interest in going into business for myself with possibilities of going into ranching.

5-Two years experience as a ranch hand.

6-Training in sociology with the hope of getting into personnel work in guidance and counseling.

7-Realized the difficulties in fulfilling my hopes of setting up my own business; also acquired a new interest in personnel work.

## Case No. 53

- 1-Doctor of Veterinary Medicine.
- 2-Veterinary Medicine.
- 3-In high school.
- 4-Having worked for a veterinarian and found the work very interesting besides being very interested in animals.
- 5-Working with veterinarian and animals.
- 6-Possibly take up course relating to veterinary medicine.
- 7-Difficulty in getting in veterinary school.

## Case No. 54

- 1-Electrical Engineer.
- 2-Forester.
- 3-While in service.
- 4-Like being outdoors.
- 6-Changed to Denver University; Changed major to Business, accounting.
- 7-A. and M. is very mis-managed; did not have guidance; have found business my line.

## Case No. 55 No response.

## Case No. 56

- 1-Ship's officer in Merchant Marine.
- 2-Forestry.
- 3-During last years of my term in Coast Guard.
- 4-Wanted to have an active job in the open and have keen interest in nature; due to disease contracted while in the service and the fact that my health is better at high altitudes.



Case No. 57 No response.

Case No. 58

- 1-Business manager of some type.
- 2-Economics.
- 3-While in high school.
- 4-Think that I would like running my own store or business.
- 5-Week end and summer work in stores as clerk.

Case No. 59

- 1-Concert pianist.
- 2-Electrical or Mechanical engineering.
- 3-While in service.
- 4-Became very interested in the work and realized that I could never make music a career due to a hand injury.
- 5-Was an automotive electrician for several years prior to entering service plus the experience of nearly four years electrical and mechanical work in the Army.
- 6-Changed from Mechanical to Electrical Engineering.
- 7-Have had more practical experience along electrical lines.

Case No. 60 No response.

Case No. 61

- 1-Thought about pharmacy.
- 2-Veterinary Medicine.
- 3-Shortly before entering the service.
- 4-Employed by a very good friend who was a veterinarian.
- 5-Work for a while with a veterinarian.

## Case No. 62

- 1-Planned to attend college.
- 2-Engineering.
- 3-While in the service.
- 4-Training in radio work in the service.
- 5-Service experience.
- 6-Changed to Light Construction and Marketing.
- 7-Did not have good enough math background.

## Case No. 63

- 1-Commercial pilot or some type of flying.
- 2-Agriculture.
- 3-After discharge from the service.
- 4-Seemed to offer more opportunity than my job previous to entering the service, that of metal fitting at an aircraft plant; I was offered a partnership with a person already set up in farming and ranching on the dryland of Colorado.
- 5-Agriculture missionary--to use agriculture as a key only in the missionary field.
- 7-I am a Christian and feel that there can be no physical peace without spiritual peace.

## Case No. 64 No response.

## Case No. 65

- 2-Forestry.
- 3-After discharge from service.
- 4-Have always liked outdoor work and feel that a job with the government would be secure.

## Case No. 66

- 1-Veterinarian.



2-Veterinarian.

3-While in high school.

4-Have always wanted to work with animals and the field is not very crowded.

5-General farm work with livestock.

6-Animal Husbandry.

7-Grades too low to be admitted to Veterinary school.

Case No. 67

1-Doctor of medicine.

2-Veterinary Medicine.

3-Shortly after discharge from the service.

4-Have always been interested in medicine and livestock; a veterinary's work and income also attracted me.

5-Experience with livestock; have always lived on a ranch.

6-Gave up school to run my parents' ranch.

7-Parents too old to manage the ranch without my help.

Case No. 68 No response.

Case No. 69

1-Work in the lumber business with my father.

2-Forestry.

3-While working for the Park Service during the summer after discharge from the service.

4-Liked working for the Park Service.

5-The work for the Park Service.

Case No. 70

1-Football Coach.

2-Physical Education.

3-While participating in sports in high school.

4-Like sports very much.

Case No. 71

1-Attend college and study science.

2-Chemistry.

3-When I enrolled at college.

4-Feel that science field is open for good chemists.

Case No. 72 No response.

Case No. 73

1-Ranger in the National Park Service.

2-Forestry.

3-While in high school.

4-Gaining my desired goal.

6-Have entirely changed my objective.

7-Realized that Forestry is not what I want.

Case No. 74 No response.

Case No. 75 No response.

Case No. 76

1-Coach and teacher.

2-Physical Education.

3-While in high school.

4-Like to work with boys; played all sports in high school.



## Case No. 77

- 1-Some form of Business Administration.
- 2-Forestry.
- 3-Upon discharge from service.
- 4-In order to fulfill requirements for work in the United States Forest Service.
- 5-Changed my field of endeavor.
- 7-Realized a genuine desire to discontinue forestry training; began a new study in which I was more interested.

## Case No. 78

- 1-Accountant.
- 2-Animal Husbandry.
- 3-At the time the G. I. Bill was passed.
- 4-I had more experience along that line than in any other, liked type of work and was not trained for any thing else.
- 5-Raised on farm; worked on farm from high school age until my entry into the service; considerable experience in the care and handling of stock.
- 6-Dairy Manufacturing.
- 7-Have sinus trouble which would be irritated by the contacts with hay and dust present around livestock farming; felt I would like work in the new field.

Case No. 79 No response.

Case No. 80 No response.

## Case No. 81

- 1-Doctor of Veterinary Medicine.
- 2-Veterinary Medicine.

3-While in high school.

4-Because of working part time with a veterinarian at home.

5-Three years part timework in a Veterinary Hospital and accompanying the doctor on out calls.

Case No. 82

2-Forestry.

3-While in the service.

4-Have always been interested in the outdoors and natural sciences and Forestry seemed to be an opportunity to live closer to them.

5-As a boy was interested in tramping through the woods trying to learn the names of the trees and in general observing the life in the woods.

6-Entomology.

7-The Forestry Department will be full for a good many years and opportunities for employment in that field will be limited. Entomology will offer practically the same chances to study the natural sciences as would Forestry and the chances for employment seem to be much better.

Case No. 83 No response.

Case No. 84

2-Industrial Arts.

3-After taking guidance tests and discussing the results with a counselor.

4-Like to work with my hands and I think that I would like teaching shop in high school.

5-Took shop courses in high school.

Case No. 85

1-Research chemist in the baking field.

2-Forestry.

3-After discharge from service.



- 4-While talking to a graduate of the college here I decided that my love for nature and the outdoors could be realized in Forestry.
- 5-Long hours of hunting and fishing; landscaping and work with trees.
- 6-Major changed to Botany.
- 7-Realized that I could attain just as satisfactorily my goal by pursuing this related field with freedom of action and choice. Forestry is and will be overcrowded; it is impractical for me to remain in this field.

Case No. 86 No response.

Case No. 87

- 1-Either farmer or doctor of veterinary medicine.
- 2-Veterinary Medicine.
- 3-While in high school.
- 4-Felt that I could round out my education this way.
- 5-Spent time on farms during the summer.

Case No. 88 No response.

Case No. 89 No response.

Case No. 90

- 1-Government service in conservation or forestry.
- 2-Forest and Range Management.
- 3-High school.
- 4-They offered something that I was interested in.
- 5-Changed to Range and Game Management.
- 7-I think that this field has more to offer than does forestry.

Case No. 91 No response.

## Case No. 92

- 1-Doctor of Veterinary Medicine.
- 2-Veterinary Medicine.
- 3-In high school.
- 4-Had been working for a veterinarian for some time and enjoyed the work.
- 5-Graduate of United States Army Veterinary School in Washington, D. C. Worked before entering army with veterinarian.

## Case No. 93

- 1-Uncecided but did some farming with my father.
- 2-Agronomy.
- 3-In the service.
- 4-Thought agronomy would help me understand farming better and give me another field if I did not start farming immediately after leaving college.
- 5-Reared on a farm.
- 6-May change major to my original plan of a special agriculture course.
- 7-Am not satisfied with what I am doing.

## Case No. 94

- 1-Pilot in Army Air Corp.
- 2-Forestry.
- 3-When first enrolled in college.
- 4-Looked like the least line of resistance.
- 6-Quit school.
- 7-Am employed as salesman which suits my talents better.



## Case No. 95

1-Airplane Mechanic.

2-Forestry.

3-While in service.

4-Liked to hunt and fish; one of the fellows I knew was a forest ranger.

6-Teacher of American History.

7-Hasn't suited to be a forest ranger; an aptitude test showed me I would do better in a profession helping people.

## Case No. 96 No response.

## Case No. 97

1-Wanted to study agriculture.

2-Agronomy.

3-While in high school.

4-Like farming and was good in science courses in school.

## Case No. 98

1-Football coach.

2-Physical Education.

3-In high school.

4-Have always been interested in sports and have participated in them.

5-Helped coach little in high school; coached swimming team; training in army.

## Case No. 99

1-Coach.

2-Physical Education.

3-In high school.

4-Have participated in athletics a great deal.

Appendix C.--MASTER DATA SHEET

Voucher Bond

A BUTLER PAPER



MARRIED CASES	AGE	A.C.E. SCORE	GRADE POINT AVERAGE	NO. HRS. STUDIED	NO. HRS. EMPLOYED	CREDIT HRS. CARRIED	CHANGED MAJOR			SINGLE CASES	AGE	A.C.E. SCORE	GRADE POINT AVERAGE	NO. HRS. STUDIED	NO. HRS. EMPLOYED	CREDIT HRS. CARRIED	CHANGED MAJOR
1	22	4	22	20	0	13	✓			1	22	4	53	40	0	17	✓
2	20	74	200			16				2	20	74	250	18	0	16	
3	26	51	150	22	0	16	✓	✓		3	25	52	150		0	15	
4	21	5	WITHDREW	PASSING						4	20	5	50	25	0	12	
5	23	37	200	48	0	17				5	22	35	133	0	28	15	✓
6	28	68	273	40	0	15				6	27	67	54	15	10	16	✓
7	20	79	200	23	20	14				7	20	78	284	45	20	19	
8	21	61	283	10	0	16				8	21	62	71			15	
9	22	75	379	22	0	14				9	22	76	300	27	0	14	
10	21	12	169	30	0	16				10	21	13	181	22	0	16	✓
11	22	32	200	15	4	13	✓	✓		11	23	33	300	37	0	23	
12	23	84	363	8	0	16				12	24	86	292			17	
13	20	68	200	25	8	17	✓	✓		13	21	68	244	25	0	16	✓
14	22	23	86			16				14	22	23	238			13	
15	24	70	162	25	25	18				15	24	71	247	30	0	15	✓
16	24	21	200	35	0	13	✓	✓		16	24	20	18			13	
17	22	42	208	35	0	15	✓	✓		17	22	42	265	20	0	17	
18	25	59	314	35	0	14				18	24	59	150	45	0	16	✓
19	22	32	277	30	10	13				19	22	32	200	30	0	14	
20	25	99	356	18	12	18				20	25	98	150	31	0	16	
21	22	21	187			15				21	23	21	000			13	
22	25	49	WITHDREW	PASSING						22	24	48	162			13	
23	23	4	221	30	24	14				23	24	4	60	19	28	15	✓
24	26	20	209	18	0	13				24	26	22	69	29	0	16	
25	26	40	325	25	0	17				25	26	37	000			15	
26	19	91	319	35	0	16				26	19	91	131	45	16	15	
27	24	33	344	10	0	14				27	23	33	213	12	0	16	✓
28	26	48	267	36	0	16	✓			28	26	48	138	25	10	18	✓
29	26	42	285	35	56	13				29	25	43	250	18	0	16	
30	21	30	245			14				30	22	30	000			15	
31	21	35	138	20	0	16				31	21	37	227	35	0	15	
32	21	62	231	30	22	16				32	21	62	250	15	0	16	
33	23	61	300	34	0	18				33	23	63	113	15	18	16	
34	21	59	280	20	20	20				34	22	57	224	30	0	17	
35	32	32	275	25	8	12				35	30	32	150	25	10	18	✓
36	24	61	238			13				36	25	61	350			14	
37	21	68	231	25	0	16				37	22	67	156	28	6	18	✓
38	22	57	200	30	0	15	✓	✓		38	23	57	285	35	0	13	✓
39	25	27	300	35	0	13	✓	✓		39	25	26	200	30	10	16	
40	25	38	232	15	15	16				40	23	38	329	34	0	14	
41	27	23	369	30	8	16				41	26	21	317	24	0	11	✓
42	19	66	233	25	0	16				42	19	65	119	20	0	13	✓
43	23	55	274	20	0	18				43	23	54	277			16	
44	21	56	377	40	0	13				44	21	56	300	35	12	15	
45	24	87	400	16	0	15				45	25	86	131	40	18	16	✓
46	24	42	220	30	0	15				46	24	42	173	25	12	15	
47	24	66	347	32	0	15	✓	✓		47	23	65	145	30	0	16	✓
48	20	42	140			15				48	21	42	314			14	
49	29	12	188	35	0	16				49	29	15	163	30	0	16	
50	25	57	200	20	10	15				50	25	54	200	37	10	15	

[illegible]

BIBLIOGRAPHY



## BIBLIOGRAPHY

1. Baker, Harold B. Working student and his grades. *Journal of Educational Research*, 35:28-35, September 1941.
2. Clark, Van D. The effect of NYA employment on the grades of men and women in college. *School and Society*, 48:803-4, December 17, 1938.
3. Cole, Luella. The background for college teaching. New York, Farrar & Rinehart, Inc., 1940. 616 p.
4. Douglas, H. R. Relation of high school preparation and certain other factors to academic success at the University of Oregon. Eugene, Oregon, 1931. 61 p. (Oregon University. Education series, v.3, no. 1)
5. Dwyer, Paul S. Correlation between age at entrance and success in college. *Journal of Educational Psychology*, 30:4, April 1939, pp. 251-264.
6. Burich, Alvin C., and Cain, Leo L. Prognosis. (In Monroe, W. S. ed. *Encyclopedia of Educational Research*. New York, Macmillan, 1941. pp. 838-59.)
7. G. I.'s and the colleges; Veteran's report no. 4. New York, Crowell-Collier Publishing Co., 1946. 60 p.
8. Garnezy, Norman, and Crose, Jean M. A comparison of the academic achievement of matched groups of veteran and non-veteran freshman at the University of Iowa. *Journal of Educational Research*, 41:547-55D, March 1948.
9. Garrett, Henry E. Statistics in psychology and education. New York, Longmans Green, 1926, 317 p.
10. Gould, J. E. The prediction of first semester grade point average at Colorado state college. Master's thesis, 1944. Colorado State College of Agriculture and Mechanic Arts. 77 p.ms.

11. Line, W., and Glen, J. S. Relationships between intelligence and achievement in the public school. *Journal of Educational Research*, 28:582-8, April 1935.
12. Manning, Frank L. How accurately can we predict success in college? *American Association of Collegiate Registrars. Journal*, 14:35-38, October 1938.
13. Moore, W. H. Measuring student motivation. *Journal of Higher Education*, 13:269-71, May 1942.
14. Morris, John. Married veterans take over the campus. *Ladies Home Journal*, 63:32-9, October 1946.
15. Odell, C. W. Predicting the scholastic success of college freshman. Urbana, Illinois, 1927. 43 p. (Illinois University. Bureau of educational research. Bulletin no. 37.)
16. Osborne, Ernest G. Family life and the G. I. student. (In *To the veterans on the college campus*. New York, Teachers College, Columbia University, 1946. p. 36-39) Reprint from: *Teachers College Record*, 47:510-13, May 1946.
17. Popenoe, Paul. Should college students marry? *Parents Magazine*, 13:18-19, July 1938.
18. Porter, Nora Wills. Occupational orientation for college veterans. *Occupations*, 25:102-104, November 1946.
19. Segel, David. Prediction of success in college. Washington, U. S. Gov't. print. off., 1934. 98 p. (U. S. Office of education. Bulletin 1934, no. 15.)
20. Stinson, Dean. Non-high-school graduates in college. Master's thesis, 1947. Colorado Agriculture and Mechanic Arts College. 113 p.ms.
21. Study of disabled veterans in colleges and universities. American Council on Education. Bulletin no. 5:1-4, May 5, 1948.
22. Sward, K. Age and mental abilities in superior men, *American Journal of Psychology*, 58:443-79, October 1945.



23. Wagner, Masie E. A survey of the literature on college performance predictions. (In Jones, Edward S. ed. Studies in articulation of high school and college, with special reference to the superior students. Buffalo, 1934. pp. 195-212. Buffalo. University. University of Buffalo studies, V. 9, series 1.)
24. Weschler, David. Mental age and intelligence quotient. Baltimore, Maryland, Williams & Wilkins Co., 1944. 258 p.
25. Williamson, E. C. College grades and NYA scholarships. School and Society, 46:510-12, October 16, 1937.