

STUDY HABITS OF 565 MONTANA STATE COLLEGE FRESHMEN

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CHAPTER I

INTRODUCTION

The writer has taught in a high school during past years and has felt that many students do not get as much as they should out of their course work. It is his belief that this is due primarily to poor habits of study. In many cases, undesirable methods of study are carried over into college work where the handicap is even greater because of increased competition.

Are the high schools responsible for this, and, if so, to what degree? How much responsibility should be placed on the pupil, himself, for failure to acquire and develop good methods of study?

Haphazard study habits have resulted in a waste of time and money, and they should be replaced by routine book sessions so that the learner can make the most of his time.

The Problem

It was the purpose of this paper to investigate the study habits of 565 Montana State College freshmen and thus to answer some of the questions about study habits in general.

Procedure

In order to analyze the study habits of 565 Montana State College freshmen, a questionnaire was designed and administered to the students

of Montana State College in conjunction with their freshman English courses. This questionnaire consisted of 23 objective questions and one essay type question. Appendix A consists of this questionnaire.

The questionnaire was designed to investigate three main areas:

1. Study habits of Montana State College students in general.
2. Comparison of study habits in the five major curricula - Agriculture, Engineering, Household and Applied Arts, Science, and Education.
3. Effects of size of preparatory school on study habits.

The first area treated the student body as a whole, regardless of curriculum. It was designed to answer the question, "What are the habits and problems of study of all pupils?"

In the second area, the study habits peculiar to each curriculum were compared with those of the others.

In area three, the high schools were divided according to size, and the methods of study of pupils from each were examined. This determined the answer to the question, "What size school best develops the study habits of its pupils?"

Two procedures of investigation were considered. One was the personal interview, and the other, the objective questionnaire. The writer chose the latter because of the time element involved; there was not enough time to contact each student personally.

In preparing this paper, the writer referred to various

literature for the drafting of the questionnaire and for answering questions on the status of study habits. Chapter II contains a review of this literature.

CHAPTER II

REVIEW OF LITERATURE

Study is regarded by McMurry and Earhart as "systematic work that is necessary in the assimilation of ideas."¹

If this definition is assumed to be correct, there should be definite methods of procedure in this systematic work which will make the assimilation of ideas an effective organized process.

Certain general factors which contribute to or detract from the effective learning process are recognized by leading educators. The following is a review of these recognized study habits.

Recognized Study Habits

Douglass and Bauer in a study on the habits of good students found six characteristics which are common to all.²

1. Looking up of new or unfamiliar words in the dictionary
2. Skimming over material before reading it in detail
3. Reading without moving the lips
4. Keeping up with day to day material and thus avoiding cramming

¹Frederick, Robert W., Ragsdale, Clarence E., and Salisbury, Rachel, Learning, D. Appleton-Century Co., Inc., New York, N. Y., 1938, pp. 38 - 39.

²Williamson, E. G., How to Counsel Students, McGraw-Hill Book Co., Inc., New York and London, 1939, p. 323.

5. Studying for a class before it begins
6. Always reviewing before examinations rather than occasionally reviewing

Although these six points are somewhat general, they should be kept in mind by all students if improved study habits are to be realized.

All poor study habits are not a direct result of the student's not knowing how to study, but sometimes are an accumulation of social causes which tend to deter even the best of students.

In a study by Leatherman and Doll,³ oversocialized factors such as too much spending money, Greek letter complex, date complex, and too many outside social pursuits were hinderances to study efforts. These authors also listed the following as being real and definite problems of students in trying to acquire and complete the studying required of them:

1. Retardation by prerequisites already mastered, resulting in repetition, loss of interest, and haphazard work
2. A bad start at the beginning of a college career, resulting in loss of interest in study
3. Difficulty in assuming self-responsibility at the beginning of college life after a close supervision on the high school level. The student is too occupied in exploring the possibilities of new-found freedom to settle down to serious study.

This report indicated that if good study habits are to become general among college students, some form of guidance as to social and extra-curricular activities should be given every student before

³Ibid., pp. 317 - 318.

he becomes hopelessly mired in outside interests with no time for study.

The planning of activities, in or out of college, is an undertaking certain to increase freedom, skill, and emotional satisfaction. A person who knows what to do, how to do it, and when to do it is almost always happier than the individual who knows he ought to do a thing but who never gets it done because he is easily distracted.

Bird has pointed out the common mistake of chopping the day into small periods while trying to plan study hours:

A common error in attended planning consists of chopping the day into short periods so that if the plan were put into operation, few of the important tasks could be done in the allotted time. Intensive mental work rarely occurs during the early phases of the study period . . . By quitting work soon after its commencement, we fail to tap resources that carry performance to its maximum.⁴

The foregoing quotation does not necessarily mean that the best results can be obtained by spending three, four, or five hours on a subject in one sitting, but rather that periods of about one hour in length would yield better results. This would give the student five to ten minutes to get his attention focused on the material to be studied and would leave 50 to 55 minutes for concentrated study. Thus, if four hours of study were required to finish an assignment, it would

⁴Bird, Charles and Dorothy M., Learning More by Effective Study, D. Appleton-Century Co., Inc., 1945, p. 47.

be more profitable to do it in four one-hour periods than in one four-hour sitting.

Planning is not the answer to all poor study habits, of course, but it is a starting point. It would not matter how well a plan was thought out and developed if other learning methods were not incorporated into it. If all parts of the plan are not sound, the chances of its being a success are reduced.

Pressey and Symonds found the following points to be characteristic of the good student's method of learning:⁵

1. Reading an assignment carefully once, then rereading and taking notes
2. Taking full, well-organized lecture notes
3. Facility in writing
4. Applying material acquired in class to topics met outside of class
5. Speed and accuracy in following directions
6. Persistence in problem solving
7. Tendency to check results and correct mistakes
8. The habit of inquiry
9. The habit of handing in work on time
10. Independence in work
11. Habit of anticipating answers to questions
12. Ability to shift attention from one thing to another
13. A keen desire for success

⁵Williamson, op. cit., p. 322.

It should be noted that many of the habits and abilities mentioned by Pressey and Symonds are qualities which most individuals like to think that they possess; however, these qualities are sometimes found to be sadly lacking when it comes time to complete an assignment which is about due.

McMurry and Earhart list the following eight factors which they consider important in successful studying:⁶

1. Realizing a specific purpose for studying
2. Supplementing thought
3. Organizing the facts collected
4. Judging the worth of statements
5. Memorizing
6. Using new ideas
7. The attentive attitude
8. Provisions for individuality

As one can see, these eight factors are not in all cases ones which can be incorporated into a study plan without a great deal of effort on the part of the individual. Factors such as these come about only by constant effort and undoubtedly vary greatly with the individual.

The pamphlet "Hints on How to Study" put out by Phi Eta Sigma, freshman honor society at Montana State College, recognizes the following as important:

⁶Frederick, Ragsdale, and Salisbury, op. cit., pp. 38 - 39.

1. Plan your work - schedule hours not only for classes but for preparation and leisure, also.
2. Health - have regular eating, sleeping, and exercising periods and attend to all illnesses immediately.
3. Study room - have a definite place to study. If possible, use it only for studying.
4. Concentration - start to study as soon as you sit down at your desk. Avoid daydreaming.
5. Efficient reading - learn to read rapidly and accurately.
6. Remembering - this should be based on understanding and association.
7. Note taking - write legibly and keep notes on one subject together. Review notes immediately after taking them and do this regularly throughout the course.

It should be noted that the points outlined by the various authorities cited were similar in many respects, but each listed some characteristics which were not found in any of the other lists.

The recognized study habits found in this chapter are outlined by leading educators and students who are interested in the development of the learning processes of all college students. If they are followed, they should not only lead to better grades, but to a more enjoyable college career.

It should be emphasized that each of these accepted study habits mentioned are not necessarily used by all good students, but are incorporated, as deemed necessary by the learner, into the plan which best fits his individual need.

Suggested Methods of Improving Study Habits

There are undoubtedly as many methods of improving study habits as there are students. Since studying is more or less a personal thing, it must first require individual thought. Unless the student is willing to admit that his habits need changing, all the information on recognized study habits in the world will not do him one bit of good.

Planning or Scheduling. Planning or scheduling is one of the most important means to successful learning. The plan should be drawn up with the individual student in mind and should be made to fit his needs. The emotions of the student and what his reaction to the schedule will be must be taken into consideration. If the learner is one who likes to plan in detail, the schedule can be drawn up accordingly. There are people, however, who react negatively to plans and systems of any kind, regardless of merit, because they cannot bear what they feel to be restrictions upon their freedom of action.

Extra-curricular Activities. Extra-curricular activities should be kept to a minimum to start with, and then can be increased gradually until they fill an adequate part of the time not required for study.

Concentration. Concentration was mentioned by the authorities as being another important factor in the improvement of learning. The proper environment is necessary for this. As in scheduling, the proper environment will vary widely among students, but some characteristics such as adequate lighting, desk and seating arrangement,

and the absence of undue distraction are common to all.

Once the student has established the environment to fit his need, he should try to do as much of his studying as possible in this place. In most cases, the distraction common to the environment will eventually become commonplace to the student, and concentration will become easier.

The learner should try to find a point of interest in each subject if he does not like it to begin with. Everyone knows that it is easier to concentrate on something that one likes and is interested in.

Reading Ability. Reading ability seems to be a "bugaboo" for many students. This can be improved, and even the best of readers can profit by employing the following suggestions:

1. Make a preliminary survey of the material before reading for detail.
2. Do not skip tables, graphs, drawings, or technical words. Learn to read diagrams of all kinds. They were put there to illustrate a point or to make the material more digestible.
3. When studying a reading assignment, read and recite alternately until you have mastered the material.
4. Look up new or unfamiliar words.
5. Find outside help to improve your reading. Counselor and guidance people are available to help solve problems such as these. Use them.

Adequate Notes. Many students do not take adequate notes. As most of the courses offered in the colleges today are lecture courses, it is almost imperative for the student to be able to take notes which are meaningful to him and of use for studying and

reviewing. The outline form for keeping notes is becoming more widely used today, and many students find this a valuable and systematic form for keeping all notes. Each person must decide for himself how extensive he wishes his notes to be and what type of system he prefers to use. The important thing to remember is to keep them clear and well organized.

When taking notes from written material, the learner should use his own thoughts and words and not those of the author.

Review. Reviewing is difficult for some students. Many do not know either how or when to review. Often they seem to resent the need to review at all, and some regard the whole business as a waste of time and energy. Others review only when examinations are near and do the work under such pressure that they regard all reviewing as a hectic cramming of facts. The following suggestions should help in the process of reviewing:

1. Review often - start all study periods with a brief review.
2. Review selectively - review only the things you don't know.
3. At the end of each course, review and organize from the beginning until all the material covered fits into place to complete the picture.

Memorization. The student should learn to memorize by association of ideas wherever it is possible. Learning facts that have a logical connection with what a person already knows is relatively easy. In fact, if the student can tie new facts securely enough to his previous knowledge, he will find it practically impossible to forget them. Memorizing should not be used in the place of thinking; it is

a poor substitute.

There are, however, some situations in which straight memorization may be the quickest and best method - the multiplication tables, for example. The student will have to use his own judgment in deciding whether to memorize by association, by straight memory, or by a combination of the two.

Health. Nearly everyone at some time or another has tried to attend classes and study while experiencing generally poor physical or mental health. The students can do much to keep these periods of illness to a minimum by regulating sleeping, eating, and exercise habits to their own needs. Mental health can be sustained only by meeting problems calmly and squarely. Good health is certainly imperative to good study habits, and depends a great deal on one's own common sense.

Summary

The most important study habits listed by the leading educators cited in this chapter are these:

1. Skimming material before reading in detail
2. Keeping up with day-to-day material
3. Taking full and well-organized lecture notes
4. Persistence in problem solving
5. A keen desire for success
6. Using new ideas
7. Concentration

In improving study habits, it should be emphasized that planning and scheduling are the most important points. This does not mean the planning of study periods, only, but also the scheduling of extra-curricular activities.

A comparison of these recognized study habits and those actually used by students at Montana State College is made in Chapter III.

CHAPTER III

RESULTS OF THE QUESTIONNAIRE ON STUDY HABITS
OF MONTANA STATE COLLEGE FRESHMEN

A questionnaire composed of twenty-four questions was distributed to the 565 freshman English students at Montana State College.

The questions were designed to enable the writer to investigate the various study habits at Montana State College. Before the questionnaire was given to the students to be answered, it was reviewed by both the Education and English Departments, which suggested changes and improvements.

While the questionnaire was distributed to 565 students, some of them did not complete it or did not answer every question on it. This fact is indicated where necessary. Many questions included "sometimes" or "other" as answers, and the student was asked to explain when this was indicated. The results of the questions are dealt with separately and in the same order and style in which they appeared on the questionnaire in the following sections.

Study Habits of Montana State College
Students in General

This section deals with the all-over study habits of those answering the questionnaire. From these answers, the writer was able to draw the necessary comparisons and conclusions to complete this paper.

TIME OF STUDY:

1. When can you study best?

109 Morning
 56 Afternoon
 325 Evening
 75 No answer

2. During what hours do you do most of your studying?

8 Immediately after lunch
 18 Before breakfast
 25 Immediately after dinner
 385 Evening
 31 Between classes
 78 Other times
 20 No answer

Of the 78 answering "other times," the majority stated that they did most of their studying during free periods during the day.

3. How many hours per week do you spend rewriting and reviewing notes?

53	0 hours	23	7 hours
123	2 hours	22	8 hours
85	3 hours	2	9 hours
62	4 hours	38	10 hours
76	5 hours	18	Over 10 hours
52	6 hours	11	No answer

4. On the average, how many hours per week does it take you to complete all your studying?

The answers to this question ran from one to 60 hours, with the majority answering between 20 and 30 hours. The average for the group as a whole was 22.27 hours per week. Two students answered one hour, and one of these had a 2.1 grade average at the end of the winter quarter. The other did not give his average. Of the six students answering 60 hours, three had above a 2.7 grade point

average, one had a 1.5 average, and two did not indicate their grade averages.

5. On the average, how long do you study without taking a break or without being interrupted?

Again, the answers to this question varied widely. One student answered ten minutes, and one answered five hours. The largest single group stated that they studied one hour without taking a break, and 94 per cent of those answering fell between the range of 30 minutes to one and one-half hours. Five gave no answer. Six said "until finished," and one announced that he studied "until the baby wakes up."

The average for the group was one hour and 15 minutes.

6. Do you have a plan whereby certain hours are set aside for certain subjects?

198 Yes
362 No
5 No answer

CLASS ASSIGNMENTS AND NOTES:

1. Are assignments in general made clear to you?

520 Yes
12 No
28 Sometimes
5 No answer

Of those answering "sometimes" the following explanations were given:

- a. Assignment given in a hurry after the bell
- b. Not enough detail given about assignment
- c. Changing assignment after once it is given
- d. Giving assignment during a discussion of some other topic
- e. Poor speaker - hard to understand him

2. What methods do you employ in studying reading assignments from textbooks?

- 76 Read it once
- 30 Read it twice
- 17 Read it three times
- 12 Outline and underline
- 6 Make written summaries from memory
- 148 Read once, outline or underline important parts
- 145 Read twice, outline or underline important parts
- 42 Read three times, outline or underline important parts
- 34 Read once, outline or underline, write summaries from memory
- 14 Read twice, outline or underline, write summaries from memory
- 3 Read three times, outline or underline, write summaries from memory
- 33 Other
- 5 No answer

These are tabulated in order of most frequent appearance:

- a. Read, outline or underline, and reread
- b. Read "headlines," go over assignments, reread and outline or underline
- c. Read as many times as is necessary to understand it
- d. Read twice and review with another person
- e. Read once slowly and skim once
- f. Read once, make up test, and test from memory
- g. Varies with the course

It was interesting to note the number of different methods used by the various students. While most of them used some system of reading and outlining or underlining, there was still a wide variation in the way they went about it.

3. Do you systematically review your text?

- 245 Yes
- 181 No
- 132 Sometimes
- 7 No answer

Forty-three and three-tenths per cent of the students answered that they did systematically review their text. Twenty-three and

three-tenths per cent stated that they did sometimes. Of the "sometimes" answers, the most frequent explanation was that reviewing was done just before a test. Other "sometimes" answers were (a) when time was available, and (b) to brush up on points that are hazy.

4. Do you answer the questions at the end of the reading assignment if there are any?

116 Yes
191 No
253 Sometimes
5 No answer

Those answering "sometimes" in almost all cases stated that they did so if they were going to be quizzed on the chapter or when they didn't have time to study the chapter by any other method.

5. Do you look up and learn unfamiliar words encountered in reading assignments?

246 Yes
103 No
214 Sometimes
2 No answer

As can be seen, a good share of the students do report looking up unfamiliar words. Most of the "sometimes" explanations came under the "if I have to know the meaning of the word to understand the material" or "if I keep coming across it" categories.

6. How would you rate the notes you take during lecture classes?

206 Good
284 Fair
55 Poor
20 No answer

If it could be assumed that a "good" set of notes meant the

same to one student as to another, these answers would have more merit. The reporter believes that the majority of the freshmen answering the questionnaire would fall in a category somewhere between "good" and "fair." If this questionnaire had been given to seniors, the answers would probably have been more significant, because of the experience gained from four years of note taking.

7. Do you think you would have done poorer work if you had not taken notes?

498 Yes
56 No
11 No answer

This tends to point out the importance of note taking, no matter what the quality of the notes taken is. Although most of the material covered by the instructor can be gotten out of the various texts used, this looking up would certainly mean more work for the student. It is considerably easier to review a set of notes which is right at hand.

STUDY CONDITIONS:

1. Can you study while people are talking or walking around?

170 Yes
260 No
122 Sometimes
13 No answer

Most of the students answering "sometimes" agreed that if those doing the talking did it in a conversational tone of voice without a lot of laughing or loud talking, it didn't bother much. Some also indicated that if the subject interested them, noise was not a problem.

2. Can you study while listening to the radio or phonograph?

271 Yes
170 No
121 Sometimes
3 No answer

If the students could select their own programs or records, most of them felt that their studying was not affected. Very few indicated that they could study easily if the record or program was loud or of a noisy nature.

FINAL EXAMINATIONS:

1. How do you study for final examinations?

24 Review text
462 Review text and notes
25 Review notes
35 Other
19 No answer

The 35 students who answered "other" generally used one of the foregoing with some variation added. Some of them stated that they reviewed the text and then made up a quiz to be taken at some later time. Many of them indicated that they supplemented their textbook and note reviewing by going over the material with a roommate or friend the night before the examination.

2. Approximately how long before finals do you start reviewing the material to be covered in the examination?

28 Night before
107 Day before
272 Week before
93 Off and on over a longer period of time
15 Study only old tests
27 Other
23 No answer

Surprisingly enough, 50 per cent of the 542 students answering

this question indicated that they started to study a week in advance of the tests, and a very small percentage the night before. Most of the students answering "other" said that they studied off and on all during the quarter and very little the night before an examination. Two stated that they never studied.

HABITS WHILE IN HIGH SCHOOL:

1. Did your parents or guardian require you to study while in high school?

212 Yes
308 No
45 Sometimes

It can be assumed that some trouble in studying during the early college years can be traced back to ineffective studying during preparatory schooling. While the 308 students giving the "no" answers probably did some studying on their own, some supervision in the home would probably have been conducive to more effective study habits.

2. Did you ever have instructions in approved methods of studying while in high school?

168 Yes
397 No

The 397 "no" answers to this question would indicate that many students have trouble studying because they simply do not know how to do it. It seems odd that schools can find time for almost any other activity but cannot find the time to give students supervised instruction in something which they will use in one form or another for the rest of their lives.

3. Who helped you most in acquiring good habits of study while in high school?

122 Parents
 50 Teacher
 40 Other person
 350 No one
 0 Other
 3 No answer

Lack of supervised training in acquiring good study habits was emphasized here as it was in the preceding answers in this section.

4. Did you get into the habit of taking notes during high school?

266 Yes
 299 No

If these answers are compared with those of the question, "How would you rate the notes you take during lecture classes?", it can be seen why 349 students rated their note taking as fair or poor. Effective note keeping, like anything else, is not something which one picks up overnight.

STATUS OF STUDENT:

1. What was your grade average last quarter?

This question had to be disregarded because of the number of students who did not answer it. 321 out of 565 questionnaires returned had no answer to this one.

2. Do you consider yourself a good reader?

133 Fast
 287 Medium
 127 Slow
 18 No answer

Generally speaking, the good reader is a comparatively fast

reader.⁷ Since most of the students considered themselves to be in the "fast" or "medium" group, reading does not seem to be a serious problem. However, additional training for the 127 "slow" readers and perhaps even for the "medium" class would probably be profitable.

3. What points do you consider necessary in developing good study habits?

The answers to this question were many and varied. The most frequently mentioned are listed below:

- a. Proper environment - good lighting, well-ventilated room, etc.
- b. Time schedules - certain times to study for different subjects
- c. Taking concise, legible notes
- d. Reviewing lessons every day and keeping up with assignments
- e. The ability to read rapidly and to retain the information covered
- f. Do not study for long periods of time without taking breaks
- g. Developing the ability to concentrate
- h. Willingness and determination
- i. Begin studying immediately upon sitting down to do so
- j. Learn to study while in high school or sooner

The preceding section gave the general results of the questionnaire without regard to curriculum. In the following section, the study habits peculiar to each curriculum were compared with those of the others.

⁷"Rapid Reading for the Physician," pamphlet reprinted from Modern Medicine, 1957.

Comparison of Study Habits in the Five Major Curricula

The similarities in study habits of students in the five major curricula were much more noticeable than were the differences. Although some of the answers seemed to depend upon the student's curriculum, these variations were slight.

TIME OF STUDY:

1. When can you study best?
2. During what hours do you do most of your studying?

These two were answered in very much the same manner. The students in all five Divisions indicated that they could study best in the evening and that they actually did so.

3. How many hours per week do you spend rewriting and reviewing notes?

The students in the Science Division were the only group which deviated greatly from the pattern set by the other four. While the students in the Agricultural, Applied Arts, Educational and Engineering fields indicated that they spent from two to five hours per week rewriting and reviewing notes, the Science students' average was between five and ten hours per week.

The Engineering Division had the greatest number of students (55.9%) who spent between two to five hours per week on notes, and very few of them worked under two or over 10 hours.

The results of the answers to this question are shown in Table 1.

TABLE 1. HOURS SPENT PER WEEK BY 565 STUDENTS REWRITING AND REVIEWING NOTES, BY DIVISION

DIVISION	NO. OF STUDENTS IN DIVISION	PERCENTAGE OF STUDENTS					Total Percentage
		Spending 0-2 hr. Per Wk.	Spending 2-5 hr. Per Wk.	Spending 5-10 hr. Per Wk.	Spending Over 10 hr. Per Wk.	Not Replying	
Agriculture	47	17.00	46.80	23.40	8.50	4.30	100.00
Applied Arts	99	12.12	51.51	20.20	14.15	2.02	100.00
Education	87	9.25	48.20	33.30	9.25	0	100.00
Engineering	177	3.90	55.90	30.60	7.30	2.30	100.00
Science	128	11.70	34.20	41.50	11.00	1.60	100.00
No curr.	27	11.11	44.44	29.64	11.11	3.70	100.00
Total No. Of Students	565	53	270	175	56	11	

4. On the average, how many hours per week does it take you to complete all your studying?

Table 2 gives the results of this question. As can be noted, the Agriculture Division had the largest percentage of its students spending between 20 - 25 hours per week. A similar pattern can be seen in the Applied Arts curriculum.

The Education Division had the largest percentage of its students spending between 15 - 20 hours per week to complete their studying. In this division, 85.06 per cent of the students fell into the 0 - 25 hour grouping. In the Engineering curriculum, 46.90 per cent of the students also fell into this group, giving Engineering the smallest percentage in the 0 - 25 hour class.

The Science Division is similar to that of Education in that Science also had the largest percentage of its students in the 15 - 20 hour group. However, it had only 67.20 per cent in the 0 - 25 hour range.

The Engineering Division had its largest single group of students in the 25 - 30 hour range, or 27.68 per cent.

The all-over picture as seen from Table 2 indicates that the students in Education spend the least time studying, while the Divisions of Applied Arts, Agriculture, and Science follow in that order. The Engineering students study more hours per week than the students in any other curriculum.

TABLE 2. HOURS SPENT STUDYING PER WEEK BY 565 STUDENTS, BY DIVISION

DIVISION	NO. OF STUDENTS IN DIVISION	PERCENTAGE OF STUDENTS										No Ans.	Total
		Hours Per Week											
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40			
Agriculture	47	0	4.26	14.89	25.53	31.91	14.89	4.26	2.13	0	2.13	100.00	
Applied Arts	99	1.01	5.05	14.14	22.22	34.35	9.09	7.07	3.03	0	4.04	100.00	
Education	87	2.30	2.30	22.99	36.78	20.69	9.20	3.44	1.15	1.15	0	100.00	
Engineering	177	0	2.82	10.73	10.18	23.17	27.68	12.99	7.91	3.39	1.13	100.00	
Science	128	0	3.13	9.38	29.69	25.00	13.28	7.81	7.81	1.56	2.34	100.00	
No curr.	27	0	3.70	11.11	25.94	22.22	11.11	11.11	3.70	3.70	7.41	100.00	
Total No. of Students	565	3	19	75	129	146	93	48	30	10	12		

5. On the average, how long do you study without taking a break or being interrupted?

The answers to this question indicated that all students except those in Engineering studied one hour. Those in the latter curriculum preferred to study for two hours at a time, probably because of the drawing and mathematics courses which are required of them.

6. Do you have a plan whereby certain scheduled hours are set aside for certain subjects?

The Applied Arts Division was the only one in which the students indicated that they had any such plan. The students in this group were almost evenly divided; 47 answered "yes" and 50 answered "no." The other Divisions answered in the following manner:

Agriculture	15	Yes	32	No
Engineering	41	Yes	136	No
Science	28	Yes	100	No
Education	19	Yes	68	No

CLASS ASSIGNMENTS AND NOTES:

1. Are assignments in general made clear to you?

"Yes" was the opinion of nearly all the students in every curriculum. Applied Arts had the highest percentage answering "no" or "sometimes," and here only 14.1 per cent answered negatively.

2. What methods do you employ in studying reading assignments from textbooks?

Nearly all of the students in every field outlined or underlined the important parts of the assignment. Those in Agriculture, Education, and Science felt that reading the assignment only once

was necessary, while those in Applied Arts and Engineering indicated that they liked to read it through twice before outlining and underlining. While these findings indicate a trend within the curricula, the writer feels that there were too many variations to set a fixed pattern for any one Division. (See question 2, page 18.)

3. Do you systematically review your text?

Most of the students answered "yes." The percentage of "no's" and "sometimes" were approximately the same in all Divisions.

4. Do you answer the questions at the end of reading assignments if there are any?

"Sometimes" was the most common answer. There was no appreciable difference among the groups.

The remainder of the questionnaire dealt with study conditions, final examinations, high school study habits, and the status of the students. There was no noticeable difference in the way the students of each Division answered these questions.

Effect of Size of the Preparatory School
On Study Habits

In order to determine whether or not the size of a school had any effect on study habits, the students were asked to indicate the size of the preparatory schools from which they came. Table 3 shows the answers to this question.

Schools with 199 students or less were considered "small," while those over 199 were designated as "large" for this study.

TABLE 3. SIZE OF PREPARATORY SCHOOL AND NUMBER OF COLLEGE FRESHMEN COMING FROM EACH

Size of Preparatory School (Student Population)	Number of College Freshmen Coming From the Various Schools
0 - 49	38
50 - 99	55
100 - 149	41
150 - 199	46
200 - 299	55
300 - 399	61
400 - 499	43
500 - 999	108
Over 1000	118
Total	565

There was very little difference in the answers which the students from the two groups gave. The only trend of any kind was shown in the answers to the question "Who helped you most in acquiring good habits of study while in high school?" A slightly higher proportion of those students coming from small schools reported that parents and teachers had helped them. Fewer students in this group answered "no one."

This one trend would perhaps indicate that students attending schools of relatively small size received more individual attention; they were not simply "faces in the crowd" or a registration number.

It is the writer's opinion, however, that the size of the high school makes relatively little difference in the student's study habits.

Summary

The greatest variation in study habits between the five Divisions - Agriculture, Education, Engineering, Applied Arts, and Science - was found in the section dealing with the time of study.

The greatest number of students in the Science Division indicated that they spent five to ten hours per week rewriting and reviewing notes, while the other four Divisions had the largest number of their students spending between two and five hours per week writing and reviewing notes.

The Education Division had the largest percentage of its students spending between 15 - 20 hours per week to complete their studying. In the other four Divisions, the largest percentage of the students indicated that they spent between 20 and 25 hours per week completing all their studying.

In Chapter IV, a summary of the material in this paper is given, and the necessary conclusions are drawn.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Most Popular Study Habits Used At Montana State College

While many different study habits were brought to light through the questionnaire, it was not difficult to pick out the most popular at Montana State.

If there were such a thing as an "average" student, his or her study habits would very likely be as follows:

He would do most of his studying during the evening in an atmosphere with very little noise. If there were other persons present, they would perhaps be talking in a conversational tone of voice with no laughing or shouting. A radio or phonograph might be playing music very softly. Approximately once an hour, the student would take a short break.

The student would complete his studying in 22 hours per week, and would spend from two to four hours of this time rewriting and reviewing notes. He probably would not take the time to draw up a schedule for studying certain subjects at definite times.

The student would complete his class assignments by reading his texts once or twice and then would go back to outline or underline the important parts. If necessary, he would reread the text to make sure that he understands what the author is trying to say. If there were questions at the end of the reading assignment, he would review them if he were going to be quizzed on the assignment. Other than

this, he would very seldom take time to answer any questions in assigned reading material.

Unfamiliar words usually would be looked up in the dictionary, and always if they were found several times in the same assignment.

The notes he takes could probably be better from a professional standpoint, but they are adequate for his own needs. He would rely heavily on them for studying, and would try to start reviewing both his notes and his text about a week before a final examination. Only once in awhile does he wait until the day before the examination.

This typical student would be an average reader. He feels that his reading is one factor which slows down his studying, and is chagrined sometimes to notice that some of his fellow students spend less time on reading assignments and still get more out of them. He would like to increase his reading speed.

Study Habits at Montana State College As Compared With Recognized Study Habits

A short review of what leading educators and authorities considered to be good study habits can be found in Chapter II. In general, there was very little difference between these and the methods employed by Montana State College students.

Most of the students answering the questionnaire do the following things which are recognized as good study habits:

1. Look up new or unfamiliar words in the dictionary

2. Skim over the material before reading it in detail
3. Keep up assignments from day to day and avoid cramming before examinations
4. Take and use adequate notes
5. Organize the facts collected
6. Have a definite place to study with the proper environment
7. Study during study time; play during recreation time
8. Associate material gathered in class with material gathered outside

There were three recognized study habits which most of the students answering the questionnaire did not practice. These students did not schedule definite hours to study for the different courses, and they did not review the questions in reading assignments. In addition, many of the students felt that their reading ability could be improved.

The writer feels that the results of this questionnaire indicate that the students at Montana State College are generally doing what is expected of them as far as studying is concerned. This does not mean that improvement cannot be made or that the study habits which they have now will be the same when they become seniors. The writer feels that if the questionnaire were given to seniors, the results would have shown that more accepted methods of study were being used. One usually improves his or her study habits while completing three years of college.

The writer also feels that many of the good study habits

lacking by freshman students should have been brought to their attention and impressed upon them while they were in high school. Much could be done to improve reading skills and note taking if only the time were taken to do so.

While the schools have a responsibility for helping the student improve scholastically, so do the parents. Parents have an obligation to see that the proper environment is present in the home to encourage studying, and that ample time is left in the daily schedule to complete any necessary homework. If necessary, pressure should be exerted by the parents to ensure the completion of this task.

In an era in which scholarship is at a premium, everyone concerned - parents, schools, and students - has an obligation to see that each student's potential ability is developed to the fullest.

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APPENDIX

APPENDIX

Questionnaire Answered by Students

Curriculum at MSC _____
 Year in School _____
 (Frosh, Soph.,
 Junior, Senior) _____
 Number of students _____
 in High School from _____
 which you graduated _____
 Age to nearest birthday _____

TIME OF STUDY:

1. When can you study best?
 ___ Morning
 ___ Afternoon
 ___ Evening
2. During what hours do you do most of your studying?
 ___ Immediately after lunch
 ___ Before breakfast
 ___ Immediately after dinner
 ___ Evening
 ___ Between classes
 ___ Other time (state when) _____
3. How many hours per week do you spend rewriting and reviewing notes?
 _____ Hours
4. On the average, how many hours per week does it take you to complete all your studying? _____ Hours
5. On the average, how long do you study without taking a break or without being interrupted? _____ (note hours or minutes)
6. Do you have a plan whereby certain scheduled hours are set aside for certain subjects?
 ___ Yes
 ___ No

CLASS ASSIGNMENTS AND NOTES:

1. Are assignments in general made clear to you?
 ___ Yes
 ___ No
 ___ Sometimes (explain if your answer is sometimes)

2. What methods do you employ in studying reading assignments from textbooks?
- ☐ Read it once
 - ☐ Read it twice
 - ☐ Read it three times
 - ☐ Outline or underline important parts
 - ☐ Make written summaries from memory
 - ☐ Others (list)
3. Do you systematically review your text?
- ☐ Yes
 - ☐ No
 - ☐ Sometimes (explain if your answer is sometimes)
4. Do you answer the questions at the end of reading assignments if there are any?
- ☐ Yes
 - ☐ No
 - ☐ Sometimes (explain if your answer is sometimes)
5. Do you look up and learn unfamiliar words encountered in reading assignments?
- ☐ Yes
 - ☐ No
 - ☐ Sometimes (explain if your answer is sometimes)
6. How would you rate the notes you take during lecture classes?
- ☐ Good
 - ☐ Fair
 - ☐ Poor
7. Do you think you would have done poorer work if you had not taken notes?
- ☐ Yes
 - ☐ No

STUDY CONDITIONS:

1. Can you study while people are talking or walking around?
- ☐ Yes
 - ☐ No
 - ☐ Sometimes (explain if your answer is sometimes)
2. Can you study while listening to the radio or phonograph?
- ☐ Yes
 - ☐ No
 - ☐ Sometimes (explain if your answer is sometimes)

FINAL EXAMINATIONS:

1. How do you study for final examinations?
- | | |
|---------------------------------------|--|
| ☐ Review text | ☐ Review text and notes |
| ☐ Review notes | ☐ Others (list) |

2. Approximately how long before finals do you start reviewing the material to be covered in the examination?
- ☐ Night before
 - ☐ Day before
 - ☐ Week before
 - ☐ Off and on over a longer period of time
 - ☐ Study only old tests
 - ☐ Other (explain)

HABITS WHILE IN HIGH SCHOOL:

1. Did your parents or guardian require you to study while in high school?
- ☐ Yes
 - ☐ No
 - ☐ Sometimes (explain if your answer is sometimes)
2. Did you ever have instructions in approved methods of studying while in high school?
- ☐ Yes
 - ☐ No
3. Who helped you most in acquiring good habits of study while in high school?
- ☐ Parents
 - ☐ Teacher
 - ☐ Other person
 - ☐ No one
 - ☐ Other (list)
4. Did you get into the habit of taking notes during high school?
- ☐ Yes
 - ☐ No

STATUS OF STUDENT:

1. What was your grade point average last quarter? _____
(Grade points earned divided by credits taken)
2. Do you consider yourself a good reader?
- ☐ Fast
 - ☐ Medium
 - ☐ Slow
3. What points do you consider necessary in developing good study habits? (list below)