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A Device for the Improvement of Study Habits

by

Maurice S. Stokes

From ancient civilizations to the contemporary period, numerous devices: such as, pictographs, hieroglyphics, numbers and the alphabet have been formed, contrived, and invented for the apprehension of ideas. Basic devices were used to teach philosophy by Aristotle in the Lyceum and Plato in the Academy. Early "tools" of learning that were used in the court school by Alcuin and at the center of learning in Athens were crude and cumbersome. The Gutenberg Printing Press accelerated learning at Salerno, Oxford University, Heidelberg University, Prague University, and other places. Today, technology and mass media form the means by which we have an explosion of knowledge at Harvard University, Tuskegee Institute, along with other colleges and universities. At the present time the utilization of perceptual devices provides the means to reason and think from the elementary school to the university.

Objectives and Procedure

In order to improve teaching effectiveness and help students, the present study has been developed. It is designed to secure a comparison and contrast of classes taught by the writer over a sixteen year period from 1950 to 1966. Most of the data were obtained from 842 students in 38 classes, over three-fourths of them were sophomores enrolled in Introduction to Teaching. Additional information is presented as related to an earlier study¹ published in 1958.

Each participating student kept a daily record of the time studied for a period of ten or more days, during the first part of the quarter. There were a few students enrolled in each class that were absent or for other reasons did not participate in the experiment; there were unusable records, also. After the initial ten or more days period, members of the class completed a "Study Sheet," which indicated how time was budgeted for a period of one week. It was to be used for the remainder of the quarter. Tabulations for the two records mentioned were started in the Summer Quarter, 1950, to the Summer Quarter, 1952; the Autumn Quarter, 1954, and the Winter Quarter, 1955; also, from the Winter Quarter, 1964, to the Spring Quarter, 1966.

"Study Habits" as related to interviews, out of class group experiences, residence halls, the home, and libraries are mentioned in this study. Controlling principles mentioned in the first study form

¹Maurice S. Stokes, "A Device for the Improvement of Study Habits," *Peabody Journal of Education*, XXXVI, November, 1958, pp. 158 to 165.

the basic philosophy, although they are not enumerated; such principles are as relevant today, if not more so than when first stated. The specific instruments used continue to be significant, although this study does not have a questionnaire to measure interest and attitudes. Less emphasis is given to the "Study Habit Sheet" with suggestions about how to read and study. Such terms as Coefficient of Correlation or Standard Deviation were omitted from the first study, which was more descriptive, although description continues to be beneficial. Intra and inter comparisons are given more attention presently.

Objectives are:

1. To present prospective teachers with a functional device for understanding the grand routes of knowledge and wisdom.
2. To secure a critical evaluation of interest, aspirations, needs, and inclinations of predominately college sophomore students as related to "Study Habits."

A Daily Record of Study Habits

At the beginning of each quarter students were asked to keep a record of time used in preparation for each class period for ten or more days. A duplicate record was to be made and given to the instructor of the class. The record for two sections of Introduction to Teaching for eight consecutive quarters follows:

TABLE 1. TEN OR MORE DAYS STUDY RECORD

Education 216.1		Education 216.7			Total	
Quarter	Number in the Class Reporting	Clock Hours Per Class Period	Quarter	Number in the Class Reporting	Clock Hours Per Class Period	Clock Hours Per Class Period
Winter, 1964	16	2.08	Winter, 1964	18	2.31	2.18
Spring, 1964	18	2.77	Spring, 1964	15	1.66	2.21
Autumn, 1964	19	2.26	Autumn, 1964	6	1.66	1.96
Winter, 1965	9	2.11	Winter, 1965	14	2.15	2.13
Spring, 1965	17	2.51	Spring, 1965	17	2.32	2.42
Autumn, 1965	28	2.55	Autumn, 1965	19	1.94	2.24
Winter, 1966	25	1.50	Winter, 1966	21	2.05	1.78
Spring, 1966	10	2.60	Spring, 1966	8	2.90	2.75
Mean	17.75	2.29		14.50	2.12	2.21
Standard Deviation						0.282

When the above mentioned table is compared with the earlier record in 1958 for the same activity, it was found that the actual time studied daily for 317 members of 13 different classes was 2.10 clock hours per class period. In Table I the results for 260 students in 18 classes was 2.21 clock hours per class period for 0.11 more clock hours.

The Study Sheet

It is imperative that those attending college use a device to routinize to a certain degree activities that are of a managerial nature. The Study Sheet is such a device. *It is a weekly schedule form that is mimeographed for each day and hour from 6:00 a.m. to 10:00 p.m.* By routinizing such activity the student is free to give thought and energy to more important cognitive activity. Table II presents the record for the first five years of the sixteen year period, which is:

TABLE 2. QUARTERLY STUDY SHEET MEANS

Quarter	Number of Classes Used	Number of Students Studied	Hours* Studied Per Week	Clock Hours Per Class Period
Summer, 1950	2	52	7.62	1.27
Autumn, 1950	2	52	7.30	1.46
Winter, 1951	2	52	9.35	1.87
Spring, 1951	2	32	9.40	1.88
Summer, 1951	2	52	8.34	1.39
Autumn, 1951	2	50	9.75	1.95
Winter, 1952	2	59	10.05	2.01
Spring, 1952	2	44	11.05	2.21
Summer, 1952	2	20	7.20	1.20
Autumn, 1954	2	70	9.80	1.96
Winter, 1955	2	44	10.25	2.05
Mean	2	47.79	12.55	1.75
Standard Deviation				0.11

*Summer School was for six days a week rather than five days.

For the eleven quarters studied the mean was 1.75 clock hours for each class hour. It was 0.10 lower during the first year of the study in regular academic year of 1950-1951.

For the nine year period from 1955 to 1964 no tabulation was made. In order to secure a more adequate sampling the record for eight consecutive quarters follows:

TABLE 3. QUARTERLY STUDY SHEET MEANS

Quarter	Number of classes used	Number of Students	Hours Studied per week	Clock Hours per class period
Winter, 1964	2	46	13.90	2.78
Spring, 1964	2	45	13.30	2.66
Autumn, 1964	2	32	13.70	2.74
Winter, 1965	2	38	15.00	3.00
Spring, 1965	2	40	15.00	3.00
Autumn, 1965	2	46	14.35	2.87
Winter, 1966	2	50	11.80	2.36
Spring, 1966	2	18	14.10	3.12
Mean	2	39.37	14.02	2.82
Standard Deviation				0.214

For the last eight consecutive quarters the mean increased to 2.82 hours studied per clock hour or 1.08 hours more. The Spring, 1966, classes have the largest mean or the best record for studying which is 3.12 clock hours per class period. The variation for individual members was from 4.2 hours to 2.00 hours. When asked if their statement was accurate, the answer was always yes. For the entire year there were six students who reported studying 5.3 clock hours per class period. The correlation for the last eight consecutive quarters for the "Study Sheet" and the "Ten or More Days Study Period" was $+.97$.

A comparison and contrast of the 1958 experiment with the present experiment completed in the Spring of 1966, indicates that the number of students working increased from 30% to 40%; those studied over three hours per class period increased from 30 to 44%. The average student, 60%, reported studying until 10:00 p.m. In 1965-66, less than 5% as in the previous study reported studying until 12:00 p.m. daily. In the present study, 63% wrote recreation, leisure time, or listed activities such as games, go to theater on the Study Sheet. Television was mentioned as the favorite recreational activity. Choir, the Church board and other experiences were stated in the recent experiment. In the earlier one, over 40% of the students indicated that they attend church services on Sunday.

Places for Study

Another educational topic is where should a student study to secure the most desirable results. Many different views have been presented by educators on this topic. It is very important. In the present year the writer has asked students in his classes: "Where do you Study?" and "where do you think the best place to study is?" Results are as follows:

TABLE 4. ACTUAL AND PREFERRED PLACES TO STUDY, 1965-66

Place	Actual				Preferred				Per- cent
	Autumn Quarter	Winter Quarter	Spring* Quarter	Total	Autumn Quarter	Winter Quarter	Spring Quarter	Total	
Dormitory	25	21	14	60	10	6	11	27	22
Home	21	18	9	48	19	14	7	40	32
Library	2	5	6	13	19	24	11	54	44
Other Places	1	1	0	2	1	1	0	2	2**
	49	45	29	123	49	45	29	123	100

*indicates that a part of three classes is used; others are for two classes.
 **is actually 1.6.

American colleges and universities have spent much time discussing the educational value of housing in residence halls, the home, room houses, sorority and fraternity houses. In general, studies have recognized the desirability of these places for making grades in the order given. The last statement is similar to Table IV although not identical, since Table IV emphasized both actual and preferred places. It indicates that 49% of the students actually study most of the time studying in residence halls and 39% study at home. For places the students preferred to study, the library was first with 44%, and the home was second with 32%. The rather limited number of experiments on this topic tend to agree with the facts presented here.

Final Examinations

Educators are rendering valuable service to students when they are helped to reach conclusions and generalize. Such a service is performed when a member of a class is taught how to bring together the elements of a course in an examination. About two weeks before the final examination members of the Introduction to Teaching class write a paper on "How I Plan to Study for the Final Examination." When preparing for the Final Examination, Mr. Z. made a schedule. An example follows:

<i>Day and Date</i>	<i>Unit to Study</i>	<i>Time</i>	<i>Total</i>
Saturday March 5, 1966	IV	11:00 a.m. to 1:00 p.m.	2 hours
Sunday, March 6, 1966	IV	2:00 p.m. to 3:30 p.m.	1 hour and 30 minutes

(This process was continued until March 15th, the day before the Final Examination)

Another member of the class, Miss L. wrote:

"In studying, I plan to use my book correctly, read rapidly, but extensively, and intensively. I will include principal ideas, class notes, films, lectures, and references.

Miss K. wrote:

"Since the Library is about the best place to study, I plan to do most of my studying for the Introduction to teaching final in the College Library or the City Library. They are equipped with all the proper study aids that are necessary for good studying. Such items as a comfortable chair and a quiet place are important."

Miss R. states:

"I have never made it a habit of studying with a group, because I find more is gained by studying alone. This is the procedure by which I will be studying. I will study two hours a day where there is plenty of light"

In another class on December 8, 1964 the autumn quarter: Miss M. wrote:

I hope to gain a better understanding and improve my previous record. Studying in groups with residents of the dormitory who are presently enrolled in Introduction to Teaching, will be one way of accomplishing my goal. After engaging in group study to tell my value of knowledge accomplished I plan to attempt to solve problems alone before taking them to group study."

For the Spring Quarter, 1962, on May 21st, Mr. J. stated:

"I plan to study for the final by reading more research books, by studying my article and making an outline of the work that I do in class. I will take more notes in class, go to the library to find out things I do not understand in Introduction to Teaching."

One of the principal values of the above statements actually indicates that in writing papers about the final examination the attention of the student is called to the need and feasibility of planning for the final; the paper is, theoretically at least to motivate, eliminate emotional disturbances, and enable one to approach the final examination with confidence. The *Study Habit Sheet*, revised in 1964, included additional aids for preparing for examinations. The following are taken from thirty-two principles:

XXIII. For reading "Mental processes involved are:

- A. Sensing relationship
- B. Analysis and selection
- C. Comparison and synthesis
- D. Drawing logical conclusions
- E. Imaginative, creative treatment of ideas resulting in discovery."

XXVII. In preparing for examinations review principal ideas, lectures, films, class notes, and reference; also, consider details as balanced Study Habits are praiseworthy.

XXVIII. Plan your preparation in advance with a separate time schedule for review and daily study of regular class activity.

XXXI. For an objective or essay examination read and study each question carefully, since it is imperative that you follow directions.

Interviews and Group Experiences

When using such methods as interviews and group counseling, "Study Habits" may be improved for securing valuable information; considering the needs and interests of the counselee; develop rapport by obtaining approval, acceptance, and ability to observe in a direct and indirect way. Important facts, revealing statements, desirable inferences, and challenging inquiries are the results of adequately using such methods. Records of the writer over a period of years indicate valuable interviews and group experiences with from three to five students. On May 1, 1957, a group of five students whose final marks ranged from "C" to "A" decided to concentrate for the remainder of the quarter on the following items:

1. Attempt to get facts as given by the instructor.
2. Stop the instructor when you do not understand class discussion and ask questions.
3. Volunteer for class discussion and participate often.
4. Be sure and get acquainted with the *Study Habit Sheet* and practice using it often.

In an interview with Miss X., whose final mark was "B", during the Autumn Quarter, November 7, 1962, a list of activities to be attained were outlines. The list includes:

1. Participation in class discussion.
2. Use the "Study Habit Sheets."
3. Make reports in class.
4. Keep accurate notes about information discussed in class.
5. Listen attentatively and concentrate on class work.

After the mid-quarter Examination on May 5, 1965, four students agreed to focus attention on the following:

1. Attend class regularly.
2. Attend the voluntary weekly group meetings.
3. Take good notes and *listen critically*.
4. Discuss problems with the instructor.
5. Participate more in class.
6. Read more news articles pertaining to the course.

During the fourth week of the Winter Quarter, April 7, 1966, an academic counselee discussed progress in all classes. The following items were to be emphasized in Introduction to Teaching:

1. Will study and read at least 1½ hours to 2 hours daily.
2. Will form the habit of attending class and film showings regularly.
3. Getting good notes and understanding them.
4. Will arrange for a conference with the teacher if I am failing or not getting along well in class.

For the interviews and group experiences mentioned, attention was focussed primarily on academic progress. It should be noted, also, that such experiences have more than usual value as cooperative, therapeutic, tension reducing, personal and social experiences; these are an integral part of educational progress and without proper development of them good "Study Habits" are seriously trammelled.

Conclusions

Evidence assembled in this study indicates that good "Study Habits are necessary for the proper use of the library, reading efficiency, satisfactory interviews, group experiences, preparation for examinations, and the solution of educational problems. From the view point of securing desirable adjustment, these are most significant. Tensions and conflicts are eliminated, although confidence is given. Without good "Study Habits" the entire educational organization is

weakened; in fact, it "Breaksdown" completely. Several inferences are:

1. Data for this study were assembled over a sixteen year period, 1950 to 1966; the facts that one of the most important instruments, the "Study Sheet", is reported in two different parts that are closely related; the same institution, the number of students, the same instructor and course used, are all factors that contribute to the reliability of this study. Two of the most important instruments used: namely, the "Ten or More Days Study Record" and the "Study Sheet" have a coefficient of correlation of .97. The high coefficient of correlation of these two separate instruments indicates validity.
2. Time studied per clock hour in class for the "Ten or More Days Record" for the study published in 1958, was 2.10 or 2'6" for 317 students; in 1966, the mean study time was 2.21 or 2'13" for 260 students. For the "Study Sheet" in the earlier study the mean study time as reported by the students was 1.75 or 1'45" per class hour for 527 students; the recent experimental results were 2.82 or 2'49" studied per clock hour in class for an almost equivalent group.
3. It is difficult or impossible to understand the cultural heritage or modern technological changes without a satisfactory device that will improve "Study Habits." A teacher must teach more in less time because of accumulated new knowledge. As a result it is the indispensable duty of the teacher to equip youth and adults with a functional device for understanding the grand routes of knowledge and wisdom.
4. Personnel work in colleges and universities implies among other items the giving and securing of the kind of information that has been presented in this study. A counselor or teacher must consider teaching and learning that will be helpful in such phases of education as interviews, group guidance, and preparation for examinations. Students should have an opportunity to improve their written and oral expression as related to "Study Habits." This will unconsciously improve their interest and attitudes.
5. Forces presented in this study offer numerous opportunities for exploration and experimentation about the desirability of studying in the library, residence halls, or other places, and what are "Study Habit" potentialities? Although conclusions are predominantly concerned with college Sophomores there is a need for more information about all levels and the time required for progress.