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Supervised Study in a Small High School

O. E. Nestvold

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SUPERVISED STUDY IN A SMALL HIGH SCHOOL

A Thesis

Presented in Candidacy for
the Degree of Master of Science
in Education

by

O. E. Nestvold

University of North Dakota

July 1936



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Certificate of Approval
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July 1933

This thesis, presented by O. E. Nestvold in partial fulfilment of the requirements for the degree of Master of Science in Education, is hereby approved by the Committee under which he has carried on his work.

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Supervised Study in a Small High School

Chapter I

Introduction

The General Aim of the Project

Much has been written and published on projects of supervised study in high schools and colleges. Probably the best examples of supervised study at the present time are the following: the Newark Plan at Newark, N. J., the Columbia Plan at Columbia, Mo., and the Double Period plan at Joliet, Ill. While these projects have been carried out in larger schools the small high school has been more or less ignored as to specific methods in teaching study habits to students. A few reasons could be cited for this apparent lack of interest, noticeably the small enrollment, the crowded curriculum with often two or three teachers to carry on the work required by the state department. In this case very few electives can be offered and even with the necessary schedule each teacher's time is very much limited. Does this mean that a small high school has a decided disadvantage compared to the larger high schools in presenting methods and supervision to the students? In view of these facts a project of supervised study in a small high school was carried out under the writer's supervision. The project was to determine if supervised study would be advisable for a small high school.

Before beginning on a project of this type, it is well to consider aims or objectives as they are essential to real accomplishment. After eleven years of high school teaching the writer has gained by practical experience the general attitude of a student toward his work. One noticeable deficiency is a general

lack of independent thinking on the part of the majority of the students. Seeing that so few students enter high school equipped with this ability, supervised study should begin early probably in the freshman year in order to serve the best purpose and be of the greatest value to the students. Many boys and girls do not continue further in their education than through high school. To quote from the Biennial Survey of Education, 1926-1928. "Of 424,437 (high school) graduates in 1927, 129,630, or 30.5 percent, went to college in 1928, and 52,248, or 12.3 percent, went to some other institution."

For North Dakota, of 3,241 high school graduates in 1927, 969, or 29.89 percent, went to college in 1928, 626, or 19.31 percent went to some other institution. The information, for North Dakota, is based on reports from 240 schools. Therefore, the better equipped they are to think for themselves and solve their individual problems in school, the more capable they ought to be to meet the problems and obstacles in life after they leave school and are thrown upon their own resources.

In order to accomplish any results of lasting value it is necessary that the teacher use specific methods in teaching pupils how to study. Ralph E. Carter, University of Kansas, has in an article in School Review Vol. 32-no.3 entitled "Teaching a Study Habit" put down these points to be considered: "(a) Acute need in elementary and secondary school life. (b) Hindrance to supervised study is the untrained teacher in technique of teaching study habits. (c) Success in teaching study habits can be procured by the indirect and direct methods and these methods differ according to the individual weakness in the study habits of the pupils."

In order that a teacher may be successful in teaching a study habit he must not use a "helter skelter" plan, but study his pupils and find out what each one needs in order to form the correct study habits. To help accomplish this a few questions were asked the students regarding how they prepare their lessons in algebra, history, and commercial law. These questions and the students' reactions are given in chapter II.

In this way one can better determine what study habits they already have acquired, which ones to correct and what new ones they must form in order to get the best results from their work. Not before they know how to go about their studying in the most effective way, will they be able to develop independent thinking.

By what has already been accomplished along the line of teaching pupils how to study, the students' interest and ambition has been touched, but it needs to be fanned into a full flame in order that it may be the drive wheel in each pupil's intellectual career and progress. The aims of supervised study: to develop independent thinking, to arouse keener interest and greater ambition, and to progress in the work individually can then become a reality.

In order that the students will enter wholeheartedly into their work so that the aims of supervised study can be attained, the teacher who supervises must be vitally interested and have the study plan so well worked out that there will be no hitch in the progress. Interest and ambition are contagious and a wide awake teacher generally has a class that is up and a doing. To be of the greatest help, a teacher must have, at least a satisfactory amount of material to work with such as / books, maps, laboratory

equipment, etc. as the subject or study requires. It can be said here that an inventive and alert teacher can make the best of a minimum of these so-called essentials that often are lacking in a small high school. Room and equipment is often cramped and wanting. So it is of the greatest importance that the inventive and resourceful teacher finds his way into the small and poorly equipped high school. In spite of these handicaps we want to work for an increase of interest and ambition on the part of the students. How can we do it? By the channels of strictly supervised study so the students will not waste their time, or use it aimlessly in trying to prepare their lessons from day to day. To imbue the students with a greater desire for learning, a little friendly competition in school is not without value in arousing interest and ambition. It should not be the means to an end, but a bit of wind in the sails that may spur us on to greater activity and help us overcome minor difficulties. Let us, in our supervision, not be afraid to inspire our students with a bit of extra praise as to their worth, for it will help us to realize one of the aims of supervised study, namely to arouse keener interest and greater ambition.

We can profit by following a few suggestions for the instructors as to their functions in supervised study given by Ernest Hanes, University high school, University of Chicago, and found in the School Review Vol. 32-no.5 "(a) Stimulation (b) Sympathetic guidance and explanation (c) Constant observation of individual progress (d) Observing subsequent unsupervised work." We want to determine if such a program of supervised study will be a help or a hindrance to better ways and habits of study and to

greater and keener interest in their school work. The best any school can give its students is the ability to study. It doesn't end with the course but should carry him on beyond his school life as he has acquired the reading habit. This will open up many doors to greater opportunities.

These helps and functions of the instructor must not become a crutch to students' independent study. "They must learn to walk alone" as H. C. Morrison, University of Chicago says. And further he states that "They must learn to acquire the ability to utilize the ordinary intellectual capital of society without the constant tutorial presence and constraint of the teacher." We aim therefore in supervised study to help the student to help himself, so that he may continue in his work without depending upon his teacher or fellow students for all information or help to overcome all the difficult problems. Therefore instruction and supervision should be individualized and students progress at their own rate of speed. We will here find a great difference in the students' ability. They must be tested to determine native ability and knowledge already acquired so that the need of each student may be determined and recorded. To determine the mental ability of each high school student the Terman Group Test of Mental Ability was given and the results tabulated. In this way the teacher may be able to give each individual student the help and consultation that he needs to spur him on. This also saves time in not having to hold up a number of students that are capable of continuing without that special help or consultation. On this point supervised study is an improvement over the old recitation method, where the whole class is held at attention when

it may be only one or two students that need the help or explanation which the teacher sees fit to give. Under supervised study the students can continue on their own assignments instead of listening to information that they already know.

In summing up, the general aims of supervised study involve the diagnosis and correction of study attitudes and habits. [Showing students how to study instead of setting students to work.]

In carrying out this supervised study project in a small high school the aim was to determine its value as compared to experiments carried out in larger and model university high schools. In the larger schools there is the advantage in time and special supervisory instructors. In this high school time is limited and two instructors will have to divide their time between supervision and general class management. Will it be profitabel in a small high school with a crowded curriculum to organize at least some of the classes into supervised study groups where they may progress at their own individual rate of speed and, independently as far as possible, under the instructor's supervision and by his study help? We also want to determine how this method may be of profit to the duller student and the more intelligent student and their individual reaction to the plan. No form of supervised study had been carried on in this school before. Students were open to suggestions, corrections and improvements. Will this supervision be a means by which these students in a small high school may get a fuller grasp on the subject studied and will they attain some study habits which will be of value to them as they continue in their education? Will it give room for expansion and more thorough work and will it help the discipline

problem in our school?

In this small high school there were only the following extra curricular activities: girls' glee club, school parties and athletics, consequently the interest would lag and monotony become tedious many times. It was hoped through this supervised study plan to arouse the interest of the student for home study work as well as for work during school hours. When a student is put partly upon his own resources he seems to feel more responsibility and will eventually make more and better use of his time. In a small high school the student spends six hours a day in school; this time is divided up between two class rooms and his vacant periods are spent in the one assigned to his use. When supervised study plan is used, he may be kept busy on his lessons as soon as the assignment is made, and the room will be more quiet than if each class did not have any definite study period. In a two room high school two classes must be assigned to the same room and while one class recites the other has that time for study. If there are no good study habits, much time may be wasted which otherwise might have been put to good use under directed study.

Chapter II

The Experimental Project

The project of Supervised Study was carried on in the high school at Palermo, North Dakota during the school year of 1931-1932. The enrollment of the school is 36. The object was to try to determine if supervised study is advisable for small high schools.

In order to get results that could be relied upon, the pupils were first given a mental test, "Terman Group Test of Mental Ability", and the classes in Algebra, Modern History, Commercial Law, and Commercial Arithmetic divided into two groups of approximately the same ability on the basis of this test. The English I class was conducted on the supervised study plan without dividing it. The two groups, the control and the experimental group, covered the same material in the same length of time, one by the recitation method and the other under the supervised study plan.

Before starting the project the pupils were asked the following questions:

1. How much time do you devote in preparing the lesson in school?
2. How much time do you devote on your lesson at home?
3. Tell in detail how you study your lesson.

A summary of the answers of ten pupils in the Commercial Law class is given on the following page and gives an indication of the un-directed study methods of high school pupils.

-8-

Answers of ten pupils in Commercial Law class
to questions regarding time and methods of study:

Time spent in study outside of class	Time spent in study outside of school	Details of how the lesson is studied
30 minutes	none	I read the lesson over once; go over it again and notice the difficult parts.
About 15 minutes	none	I read over the lesson.
About 40 minutes	Sometimes 30 minutes	I read the lesson over several times. I take notes on each chapter and study them. I work out questions and case problems at end of chapter.
30 to 45 minutes	none	I read over the lesson; take notes on main parts. I generally read over the questions given in the chapter and try to answer them.
30 minutes	none	I read each chapter through. Then I try to answer questions found in the chapter. Those I cannot answer I look up. Some important paragraphs I go over two or three times.
About 15 or 20 minutes	About 45 minutes	I read the chapter through. Then I outline the chapter.
About 45 minutes	none	I read the lesson through; pick out things to be learned and study them awhile.
About 45 minutes	none	I read the lesson several times. I answer the questions at end of chapter and take notes on the important parts. I also keep an outline.
45 minutes	none	I read the lesson and answer the questions, I read the difficult parts several times.
20 minutes	none	I read the lesson over and note the important parts.

The same questions were asked of the pupils in other classes, the answers there revealing the same general methods of study with slight variations according to the different subjects studied.

Experimental Project in Algebra

The Algebra class consisted of twelve pupils, six in each group. The median score on the mental test was 107.2 for the control group and 97.5 for the experimental group.

During the early part of the experiment the following directions for study were given. 1. Notice what is given in a problem and what is to be found. 2. Try to understand and keep in mind the general terms of the problem. 3. Try to understand what is to be solved. 4. Try to understand how to continue step by step in solving a difficult problem. Think it out before working it out. 5. Try to understand what your answer is to be in whole numbers or fractions, X or Y's etc. 6. Try to estimate the approximate answer. 7. Prove your answer.

For the supervised study group the work in the text book was divided into nine units, one for each school month. Besides the text, and "Algebra Work Book" by Foulkes, Kingsburry, Wallace and Goff (MacMillan & Co.) was used and the work therein divided to correspond with the text book. At the end of each month these work books were handed in to the teacher for examination and correction.

The fifty minute class period was divided between the two groups as follows: the control group was given thirty minutes for recitation and the experimental group was given twenty minutes of supervised study. During the supervised study periods the pupils

did most of their work at their desks, some work being done at the black-board. Each pupil proceeded at his or her normal rate. The teacher would observe the work done and help those that had difficulties with their problems. It was the aim of the teacher to apportion his time equally among the pupils, but it was found that more time had to be given to the slower individuals.

At the end of each month an examination was given to both groups and marks recorded on a chart made for that purpose. The median per cent was found for each group and put down on Table I for each monthly test.

TABLE I. MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN MONTHLY TESTS IN ALGEBRA.

Time of Tests	Median Percent of Control Group	Median Percent of Experimental Group
October 30	82	65
November 27	77	40
December 23	60	80
February 5	50	62.5
March 4	61.5	67.5
March 30	67.5	87.5
April 26	92.5	87.5
May 17	88.5	95

This table shows the general progress of the two groups compared. On the first monthly test the control group got a median of 82% and the experimental group got a median of 65%.

As is seen on the table the control group scored higher in their median on three monthly tests and the experimental group on five monthly tests. As the experiment was not started until the second month of the school year only eight tests are included.

A graphical illustration of the results of the tests in Algebra is given below.

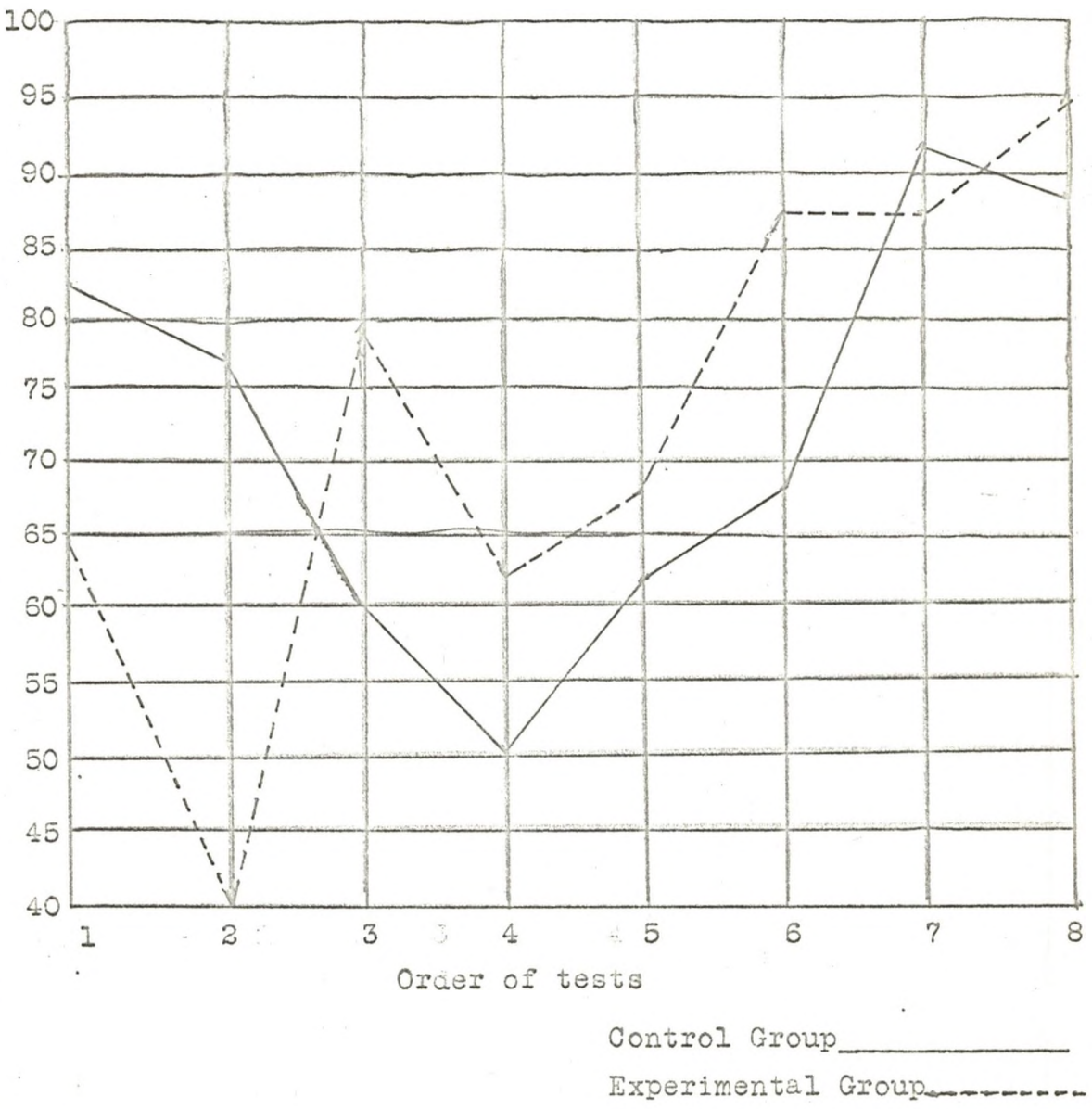


FIG. I. - MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN MONTHLY TESTS IN ALGEBRA.

Experimental Project in Commercial Law

Commercial Law is a half-year subject and was completed by the end of the first semester. In this class there were fourteen pupils, giving seven in the control group and seven in the experimental group. The mental test median for the control group was 129 and for the experimental group it was 126. The experiment was begun in October, the second month of the school year. The forty minute period was divided between the two groups. The control group was given twenty-five minutes for recitation and the experimental group was given fifteen minutes of supervised study. During these fifteen minutes difficult problems were explained to individuals and a general study period conducted.

The work in the test was divided up into monthly units according to general topics for discussion. A work book, "Case Problems and Tests in Business Law" by Frederick K. Beutel and Carmen G. Rediker (Ginn & Co.) was used for the experimental group to supplement the text book. This was also divided up according to topics to correspond with the work in the text book. At the end of each week these books were handed in and the work looked over and corrected. The pupils were allowed to work at their own rate of speed just so they had the work for the unit covered by the end of each month. A test was then given to both groups and results noted on chart and median for each group noted on Table II.

For the monthly tests I used "Commercial Law Achievement Tests" by P.B.S. Peters, Lloyd E. Greiner, and Fred H. Green. (Southwestern Publishing Co.).

TABLE II. MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN SEMI-MONTHLY TESTS IN COMMERCIAL LAW

Time of Test	Median Percent of Control Group	Median Percent of Experimental Group
October 14	54	77
October 28	62.5	68.5
November 12	71.5	71.5
November 24	76.8	73.2
December 4	78.5	87.5
December 17	77.5	82.5
January 8	75.8	77.5
January 13	78.8	72.5
January 22 (Final State Examination)	69.2	77.5

The median for the first monthly test was 54 for the control group and 77 for the experimental group. The control group had the highest median on two tests and the experimental group the highest median on six tests.

On page 15 the results of the tests in Commercial Law are revealed in graphical form.

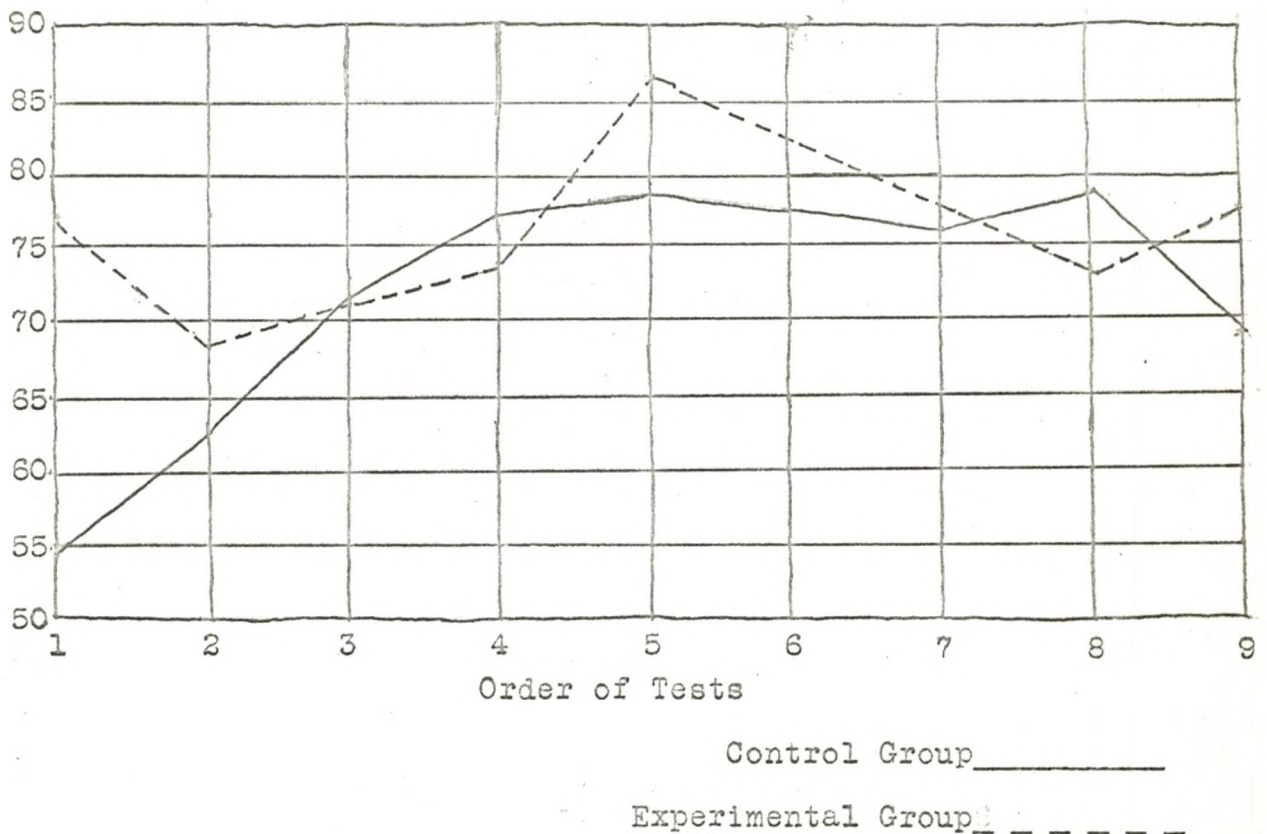


FIG. 2. - MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN SEMI-MONTHLY TESTS IN COMMERCIAL LAW.

Experimental Project in Modern History

In the modern history class there were fourteen pupils giving seven in the control group and seven in the experimental group. One dropped out of the experimental group at the beginning of the second semester, due to illness.

The mental test median for the control group was 111 and for the experimental group it was 107.

The text book was divided into units covering each historical period as for example: "Russia and the Near East", "The Unification of Italy" etc. and after each of these periods had been studied a test was given to both the groups. The median for the control group on the first test was 72.5 and for the experimental group it was 60

The median for the control group was higher on seven tests; for the experimental group it was higher on three tests as can be seen on Table III.

TABLE III. MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN TESTS IN MODERN HISTORY.

Time of Test	Median Percent of Control Group	Median Percent of Experimental Group
October 25	72.5	60
November 27	82.5	50
January 8	76.5	52.5
February 25	67.5	72.5
March 10	77.5	63.5
March 21	82.5	80
April 18	72.8	71.5
April 19	77.5	76
April 26	68.8	72.5
April 28	72.5	75

On page 17 the results of the tests in Modern History are revealed in graphical form.

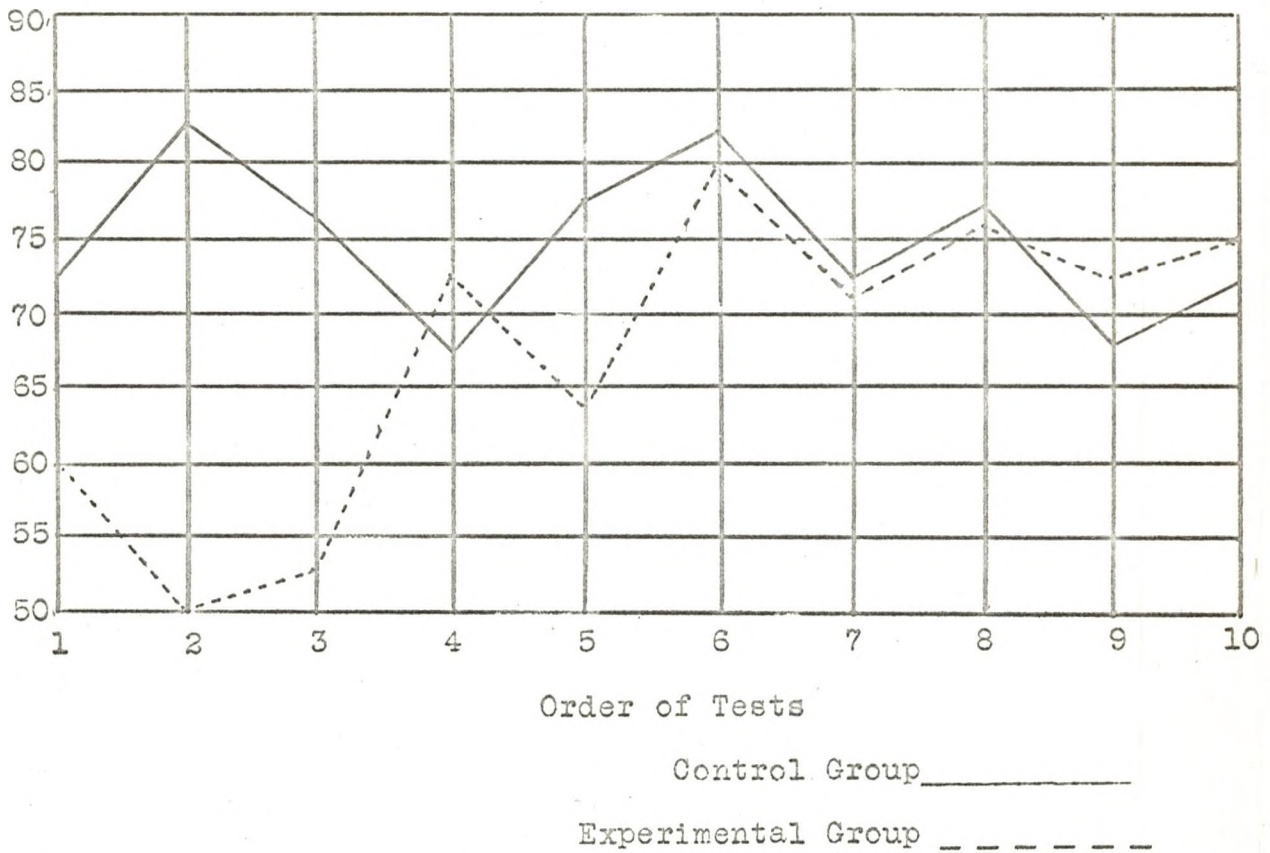


FIG. 3. -MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN TESTS IN MODERN HISTORY.

The period of fifty minutes was divided between the groups, the control group being given thirty minutes for recitation and the experimental group twenty minutes of supervised study. The work books used in Modern History were "Self Directing Historical Notebook" (Webb & Co.) and "Work Book in Modern History" by Foster and Seehousen, (MacMillan Co.). The text book used was "Modern History" by Hayes and Moon, (MacMillan Co.). The work book was based on this text, and it was procured as a supplementary book to be used by the experimental group when using their workbooks.

Experimental Project in Commercial Arithmetic

The experiment in Arithmetic was begun the latter part of January, 1933, and continued for one semester as it is a half-unit subject. The class numbered eight pupils and there were four in each group. This was the smallest class in high school and it was a little more difficult to conduct the project successfully.

The mental test median for the control group was 122.5 and for the experimental group it was 130. The forty minute class period was divided equally between the two groups. The usual recitation work was carried on for the control group, while a work book, "The New Birch Rapid Calculation Lessons" by A. J. Ladd, (Lyons and Carnahan) was given to the experimental group to be filled in at school. This group also did some home work. To accompany the work book was a set of Standardized Tests that were given to both groups, two tests being given each week. The results have been noted on Table IV giving the median from each group on every test.

TABLE IV. MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN TESTS IN COMMERCIAL ARITHMETIC

Time of Test		Median Percent of Control Group	Median Percent of Experimental Group
March	14	66.8	57.5
March	18	68	68
March	22	57.5	77.5
March	29	59	82.5
April	1	95	96.8
April	7	82.5	90
April	13	37.5	47.5
April	20	91.5	93.5
April	27	72	82
May	6	87	90
May	11	85	82
May	18	38	50

The results revealed by these tests are given in graphical form on page 20.

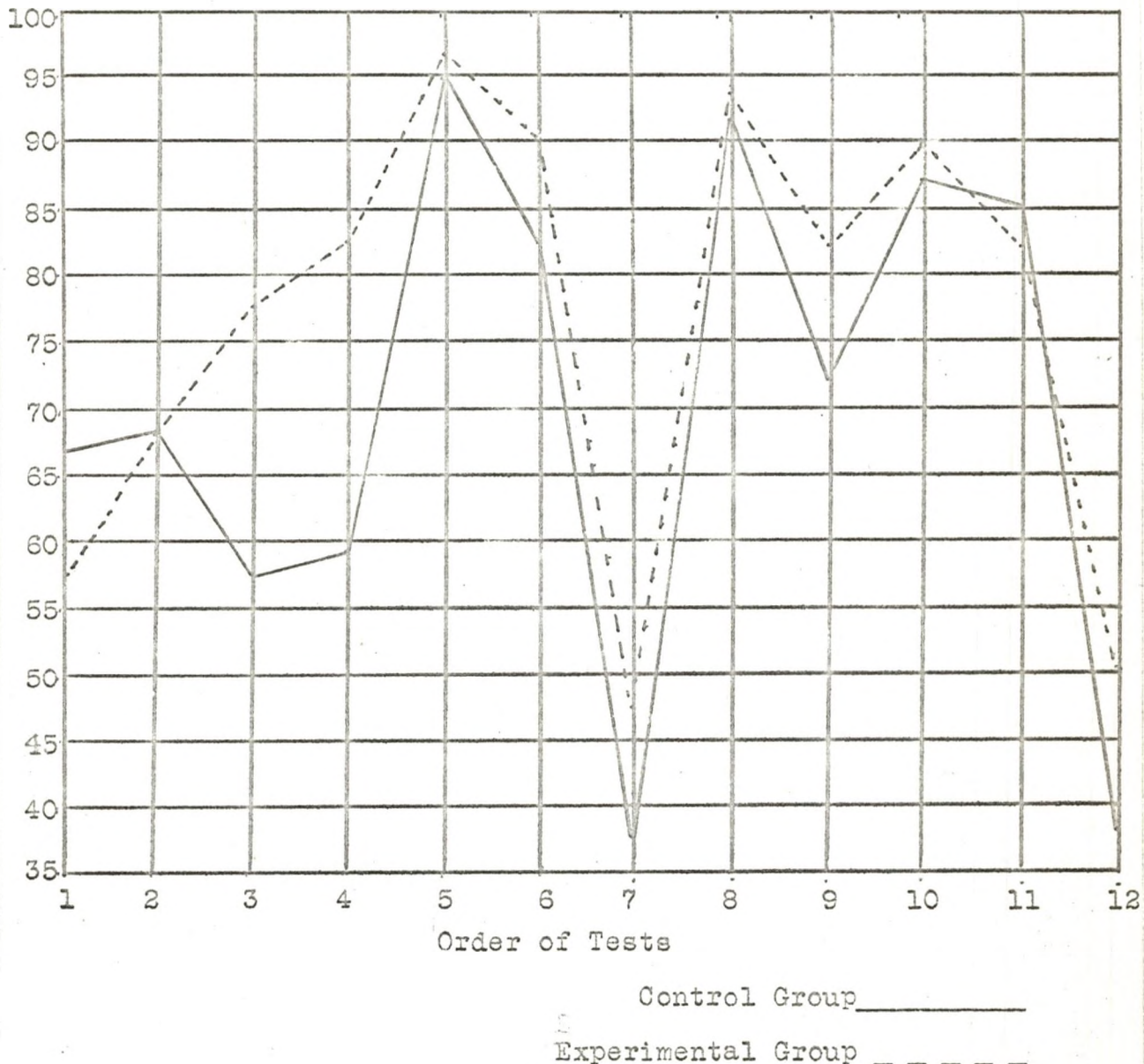


FIG. 4. -MARKS RECEIVED BY THE CONTROL GROUP AND EXPERIMENTAL GROUP IN TESTS IN COMMERCIAL LAW.

Experimental Project in English I

The experiment in English I was carried out by Miss Ruth Hagen, the assistant high school principal. She took the whole class together and conducted the work under the supervised study plan. The class numbered twelve pupils.

The class period was fifty minutes. The first twenty minutes were given to the assignment and the explanation of the advance lesson. This lesson was worked outside of the class period. During the remaining thirty minutes of the class period the work books were exchanged among the pupils and the work corrected, after which they were returned to their owners and errors looked over and noted. When the books were completed the review assignments were given. The class period of fifty minutes was now supervised by the teacher, and pupils got help with any difficulties they had encountered during the semester. All errors in the work book were now corrected.

There were fourteen tests that accompanied the work book and these were given to the class at intervals of three days.

This English I course was given the last semester of the school year and dealt with English grammar and punctuation. The work book used was "English Grammar and Punctuation with Tests" by Harriet B. Lockwood.

The median for the class after each test is recorded with discipline and the rudiments of grammar were learned better. Greater interest was revealed by the pupils under this method than under the recitation method.

TABLE V. MARKS RECEIVED BY THE EXPERIMENTAL GROUP IN TESTS IN GRAMMAR AND PUNCTUATION.

Number of test	Median Percent of Experimental Group
I	91.5
II	89.5
III	89.5
IV	84.5
V	97.5
VI	88.5
VII	96.5
VIII	87.5
IX	93
X	83
XI	81.8
XII	94.5
XIII	68.5
XIV	85.8

On page 23 these results are translated into graphical form.

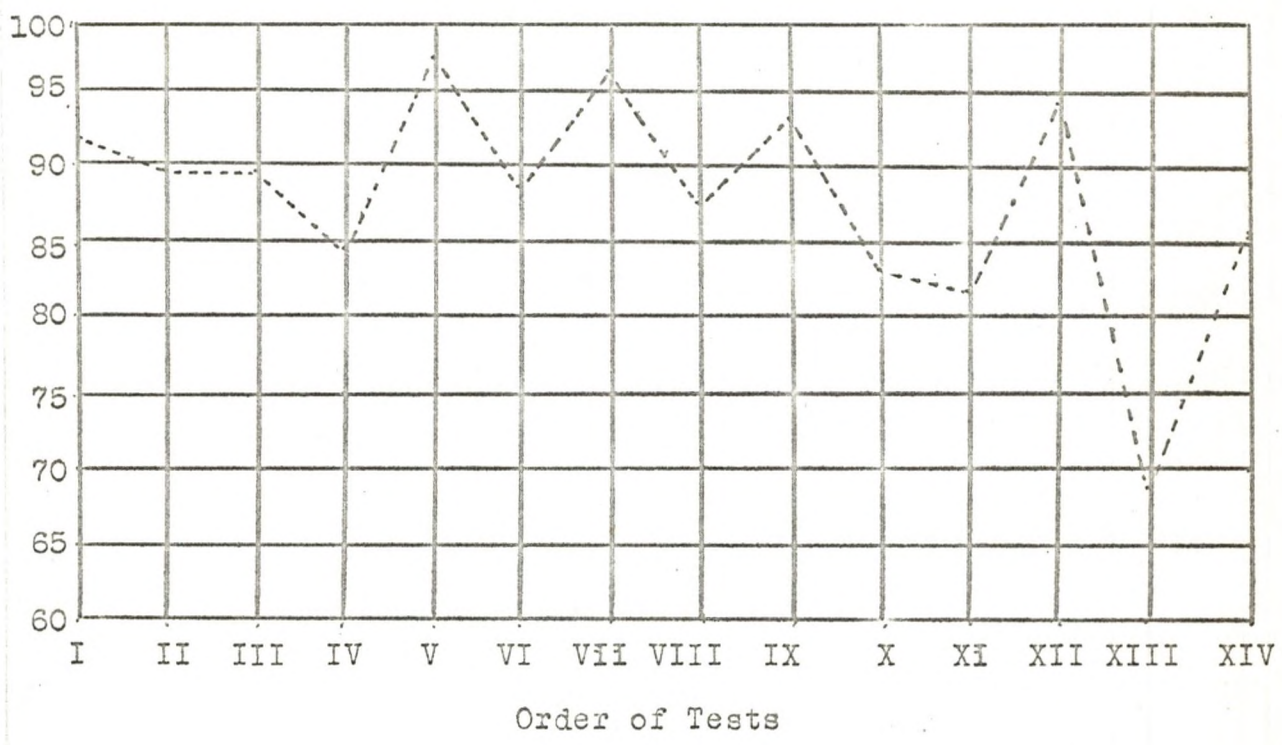


FIG. 5. -MARKS RECEIVED BY THE EXPERIMENTAL GROUP IN TESTS IN GRAMMAR AND PUNCTUATION.

Chapter III

Conclusions and Recommendations

Relative Efficiency of the Two Plans

After eight months of work on the experimental project of supervised study in a small high school, the subjects considered a success under supervised study were Algebra, Commercial Law, Commercial Arithmetic, and English I (grammar and punctuation). These subjects need very few reference books and no lecturing to add interest to the work. This is especially true of English I. The problems themselves and their solution are motivating enough to spur the pupil on to hard and persistent work.

The algebra pupils in the experimental group were from the very beginning of the project immensely interested in their work and their interest was fairly well maintained until the end of the course. When they were allowed to work at their own rate of speed they covered both their text book and their workbook. As the work progressed they seemed to become more and more independent of help or explanation from the teacher. The recitation group did not show as much interest and seemed to depend upon the recitation period for help in solving any difficult problem. The experimental group delighted in a little competition and developed considerable self-reliance.

The median score on the mental test for the experimental group was lower than the control group. In spite of this fact their median for the monthly tests were higher than the recitation group's after the first two months, except the month of April, when they lagged a few points. For the final state ex-

amination of May 24, 1932 the median for the control group was 57.5 and for the experimental group it was 65. The returns from the State Board showed that three failed in the control group and only one failed in the experimental group.

The results revealed by the Holtz Algebra Scale (Series A) which are indicated on Table VI and Figure 6 corroborated the results from the monthly tests noted in Table I.

TABLE VI. A COMPARISON OF SCORES BY THE EXPERIMENTAL GROUP AND CONTROL GROUP WITH STANDARD NINE MONTH GROUP ON THE HOLTZ ALGEBRA SCALE (Series A)

Type of Test	Standard Nine Month Group	Experimental Group	Control Group
Addition and Subtraction	7.9	5.6	5.5
Multiplication and Division	7.9	6.5	7
Formulaes and Equations	7.8	7.9	8
Problem Tests	5.6	4.5	3
Graph Tests	7.6	6	4.5

On page 26 these results are given in graphical form.

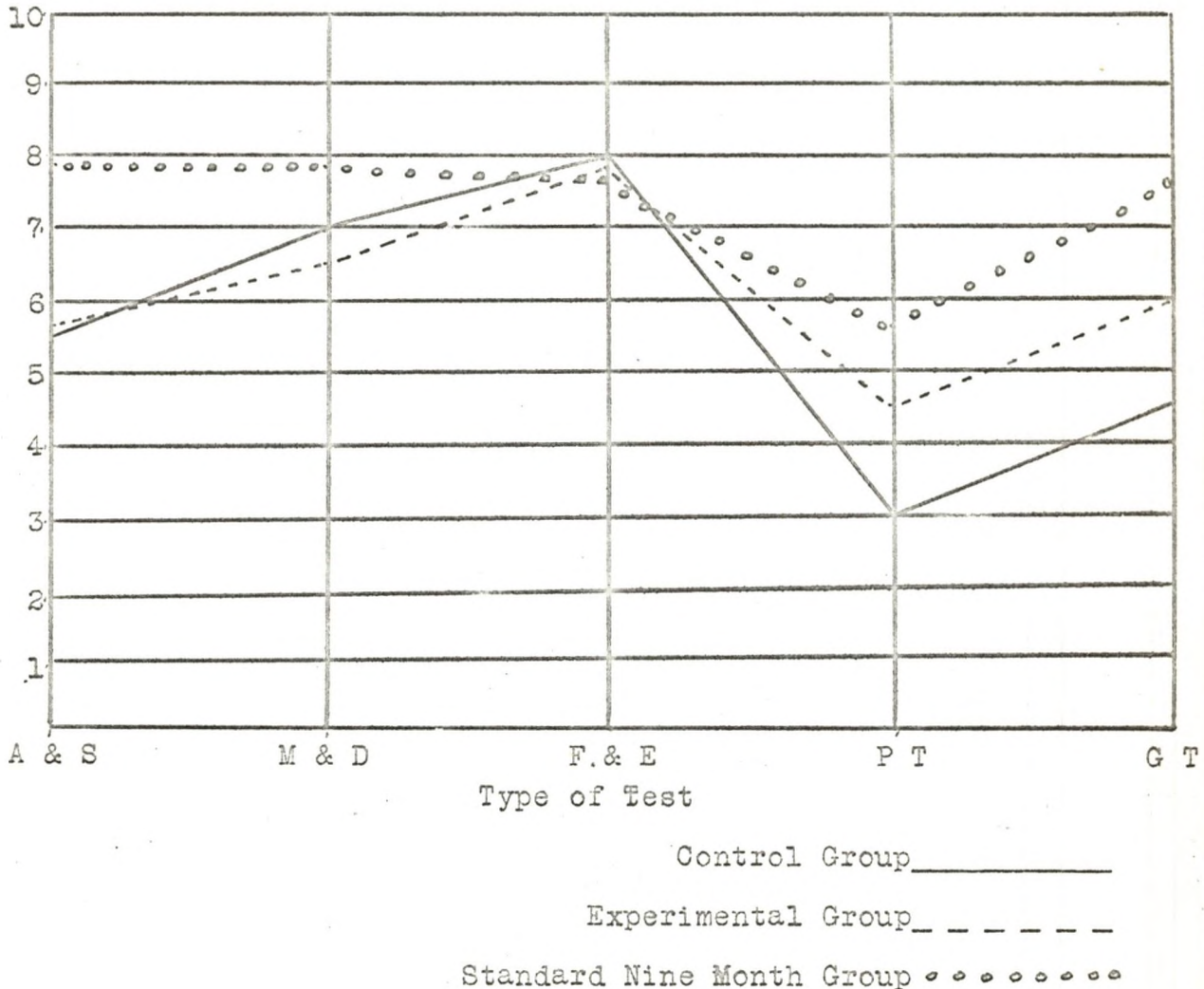


FIG. 6. -A COMPARISON OF SCORES BY THE EXPERIMENTAL GROUP AND CONTROL GROUP WITH STANDARD NINE MONTH GROUP ON THE HOLTZ ALGEBRA SCALE (Series A).

In Commercial Law the experimental group was a great success. The result of the state final examination as revealed by the teacher's marks was a median of 76 for the control group and 74.75 for the experimental group. Returns from the State Board however showed that all passed in the experimental group while one failed in the control group.

Taken generally, commercial law is a cut and dried subject except to those few pupils who are naturally interested in law

questions. Under supervision and the use of their work book all the pupils in the group seemed to take more interest and worked hard both in school and at home. The recitation group depended more upon what the teacher told them in class and would not work hard enough to become interested in the subject, consequently they retained less of the material covered.

In History closer supervision was necessary to insure success than was the case in the other subjects carried out in this project. More explanation and help was asked for by the experimental group in this subject, and still the control group appeared to get a better grasp of the subject matter. This may be due to the fact that history, by the very nature of the subject, lends itself more easily to a lecture or discussion method, and comments in class add to the interest and understanding of the topics. At the beginning of the project the experimental group found their work book and text diverting, but this interest lessened as the months passed and they did not seem to be able to keep the progress of events clearly in mind. Their knowledge was chaotic.

The returns from the state final examination revealed only slight differences between the two groups.

The results of the project in Commercial Arithmetic were much the same as in Algebra, when measured by the marks received by the two groups in the tests. Commercial Arithmetic being a senior review subject had nothing new to work for but consisted mostly of drill work, consequently there was greater difficulty in maintaining interest. The experimental group had the higher median on every test except two, the first and the tenth. For

the teacher's marks on the final state examination of May 27, 1932, the control group got a median of 75 and the experimental group a median of 80. The final returns from the State Board gave a median of 76.25 for the control group and 83 for the experimental group.

English I (grammar and punctuation) is a subject where drill is the vital need in order to master the essentials. The work book and tests given under supervision met this need in a very successful way. The pupils applied themselves diligently and were able to remember facts better when they discovered them by themselves.

The median of the experimental group for the final state examination as revealed by the teacher's marks was 85.8.

A class in Commercial Geography was carried on in which only the supervised study method was used. This class was outside the experimental project and no lesson or class period was provided on the schedule. The pupils were allowed to work as fast as they wanted to. Several text books were used besides a regular work book by M. E. Branom. (MacMillan Co.) "The Branom Practice Tests in Advanced Geography". The pupils consulted the teacher in extremely difficult problems only. The class proved a great success and a great time saver in a crowded curriculum. Of a class of fourteen pupils the returns from the State Board indicated that with the exception of one, all passed their final state examination.

Supervised Study in Other High Schools

While carrying on this experimental project in supervised

study, sixty letters to some of the larger high schools of this country were sent out, asking for their plan of supervised study. Thirty-six replies were received and eighteen of these used some plan of supervised study. Two plans from North Dakota high schools were received. The best plan was from Supt. J. C. Gould, Mandan, North Dakota. Here a sixty minute period was used, the first half for recitation and the last half for assignments and supervision. That was the plan in the majority of the answers received. The two best plans from outside states were from Tampa, Florida, E. L. Robertson, director of the high school, and from Boulder, Colorado, C. M. Ware, Principal of the high school. Both made an assignment of the work to be done in the sixty minute class period so that no time was wasted.

Table VII gives in brief the plans for supervised study employed by the schools that had made definite provisions in their schedules for that method of directing the learning of their pupils.

TABLE VII—SUPERVISED STUDY PLANS USED IN EIGHTEEN HIGH SCHOOLS

H. School	Augusta, Georgia	We use supervised study but have no definite plan.
H. School	Bemidgi, Minn.	We use the Morrison Plan of supervised study.
H. School	Boulder, Colorado	Out of a 60 minute class period, 35 minutes are generally used for recitation and 25 minutes for supervised study.
Central H. S.	Charlotte, N. C.	Use the Morrison Plan as far as possible.
University H. S.	Pittsburgh Pa.	We use a modified form of the Dalton Plan. Require 2 hrs. of home work from Monday to Friday.
Senior H. S.	Cheyenne, Wy.	Divided Period Plan used. Period 60 minutes in length. One half for recitation and one half for study.
Amundsen Jr. H. S.	Chicago, Ill.	Use the laboratory plan. Half of time devoted to supervised study. Work divided into units. Mastery tests given at end of each unit.
East H. S.	Des Moines, Iowa	Periods 50 minutes in length in Jr. High School and 65 minutes in length in Sr. High School. Teacher is given freedom in handling the work to fit the type of recitation.
H. School	Little Rock, Arkansas	60 minutes periods used. First half for recitation and second half for assignment and study. Teacher free to use whole period for recitation one day or for several days; also free to use whole period for directed study.
H. School	Louisville, Ky.	60 minutes period used. Some teachers use the Morrison technique, some Miller and some use other techniques. No hard or fast rule regarding division of the period.

TABLE VII. (continued)

H. School	Mandan, N. Dak.	60 minute period used; teachers are enabled to conduct supervised study in the latter part of each hour.
Jr. & Sr. H. S.	Minneapolis, Minn.	Used in Jr. High Schools for Geography, History, and Community Life Problems, and in Sr. High Schools for World History, U. S. History, and Civics. Organization of work in large units.
Marshall H. S.	Richmond, Va.	60 minute period. Half devoted to instruction and half to supervised study.
H. School	Salt Lake City, Utah	We carry on classwork with supervised study; no definite plan however.
Jr. H. S.	Tampa, Florida	Two plans suggested to their teachers. One a double period plan, 30 minutes for recitation and 30 minutes for study. Other plan gives five minutes for recapitulation, 2 to 3 minutes for statement of day's plan, 15 to 20 minutes for discussion of day's plan, 15 to 20 minutes for assignment of new lesson, and 15 minutes for supervised study.
H. School	Wheeling, W. Va.	Use supervised study but with no definite plan.
H. School	Williston, N. Dak.	We employ supervised study in two ways. We have an old and competent teacher to take charge of study hall who helps the pupils in all the work. Also a part of the recitation period is devoted to supervised study and to giving individual help. We have no special scheme.

Table VIII contains a list of those schools that do not use supervised study, with occasional reasons given why the method is not employed.

TABLE VIII * LIST OF EIGHTEEN SCHOOLS THAT DO NOT USE SUPERVISED STUDY

H. School	Atlanta, Georgia	School day begins at 8:30 and ends at 2:00. Have not been able to accomplish much with supervised study in such a short day.
H. School	Baltimore, Maryland	Have no plan.
H. School	Bayonne, N. J.	No plan of supervised study owing to crowded conditions.
H. School	Bismarck, N. Dak.	Have no organized plan for supervised study.
H. School	Boston, Mass.	Have no set plan; individual teacher solves problem each in his own way.
H. School	Burlington, Vermont	No plan.
H. School	Charleston, S. C.	No supervised study.
U. H. S.	Ohio State University	No definite plan.
H. School	Concord, N. H.	None.
H. School	Fargo, N. Dak.	Do not use supervised study plan.
H. School	Galveston, Texas	No special plan.
H. School	Grand Fks. N. Dak.	We are not doing anything in supervised study.
U. H. S.	Los Angeles, Cal.	Have no plan.
University H. School	Minneapolis, Minn.	No plan.
H. School	Phoenix, Ariz.	No information given.
H. School	Pittsburgh, Pa.	No plan.
H. School	San Fran. Cal.	No supervised study. It is too great a panacea for the indifferent teacher.
U. H. S.	Urbana, Ill.	No plan.

The majority of the writers of these letters agreed that supervised study can be successfully carried on under the direction of a wide-awake and progressive teacher, but that it would be too great a problem for the indifferent teacher. They also agreed that supervised study is of the greatest help to the less competent pupil who needs to work under a task-master. The studious and diligent pupil will of course do well under either plan. In discussing the supervised study plan used in the Mandan high school, Superintendent J. C. Gould states: "The plan has been successful enough so that we are continuing it.....". Principal A. J. Burton, DesMoines, Iowa, writes: "We find the plan very satisfactory. Students make better progress under the direction of the teacher than they do working without direction."

Recommendations for Further Experimentation

For a more complete experiment a longer class period of at least sixty minutes is recommended, so that each group could be given a little more time. If the whole class were under supervised study a forty minute period would be adequate. More complete results can be obtained if the whole class is under supervised study than when it is divided into two groups as it was in my experiment.

More supplementary texts should be used for supervised study, especially in history and the social sciences. It would also be better if the supervised group could be in a separate classroom where no disturbance from other classes would divert their thoughts.

Conclusions

Viewed from the results obtained in English I (grammar and punctuation), Commercial Law, Commercial Arithmetic, and Algebra, the supervised study plan was successful. From the results obtained in these classes, where supervised study was practically the only means of instruction, the writer believes that the recitation period can be eliminated or greatly reduced.

Under this plan the interest of the pupils is more easily aroused, thereby reducing disciplinary problems. This plan would be a great advantage to the dull but willing pupil by better caring for his individual needs. This fact was clearly brought out by the results of the final examination in the Algebra classes where the experimental group of a lower intelligence surpassed the recitation group.

There would be the opportunity of offering a wider curriculum because of the elimination of recitation periods which under the old plan took up the greatest percentage of the teacher's time. Under the supervised study plan one teacher could conduct successfully two classes at the same time, especially if each class did not number more than fifteen pupils, which is often the case in small high schools. An example of two classes that could easily be supervised at the same time would be Algebra and Commercial Arithmetic. In our age of economy in educational organization this would probably be a way of reducing expenses without impairing the efficiency of the school.

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Chapter IV. Bibliography

Books that have proved particularly valuable

Dewey, John, · How We Think D.C. Heath and Co. Boston, 1910.

An invaluable authority on the mental process of thinking. Has made clear one of the aims in supervised study, namely "independent thinking".

Colvin, S. S. The Learning Process MacMillan Co. N. Y. 1915.

Gives a good analysis of the fundamental conceptions of the learning process and treats them from a psychological point of view. It has been a help in forming good rules for acquiring the correct study habits so necessary under the methods of supervised study.

Hall-Quest, A. L. Supervised Study in the Secondary School
The MacMillan Co. N. Y. 1925

Has been a source inspiration and help to me in carrying out this project of supervised study. The book deals with all the phases of supervised study in a high school and also takes up several of the specific subjects individually, such as English Composition, History, Mathematics, Languages etc. In the Appendix he gives a short review of methods that have already been tried out in several schools.

Hillegas, M. B. The Elements of Classroom Supervision
Laidlaw Brothers, 1931.

Chapter X presents various theories of the learning process, stressing especially two of them: 1. The Law of Readiness. 2. The Law of Exercise.

Johnson, F. W. Administration and Supervision of the High School. Ginn & Co. Chicago, 1925.

I have found chapter XIX helpful in suggestions and ideas. It is the only chapter on supervised study in this book, but worth reading as it gives a thorough account of how to administer supervision, it aims and methods. Also gives results that have been noted in several schools.

McMurry, F. M. How to Study Houghton Mifflin Co. N. Y. 1909.

Gives a number of very splendid factors for study. These must be considered in a project of supervised study in order to have any success with the experimental group.

Tryon, R. M. The Teaching of History in Junior and Senior High Schools. Ginn & Co. Chicago, 1921.

Chapter II on supervised study in World History gives clear directions for study helps in this particular subject.

Shorter articles of special value

Brown, W. W. and Worthington, J. E. Supervised Study in Wisconsin. School Review, Volume 32, pp. 603-612, Oct. 1924.

Outlines in detail a good program for supervised study that has been followed in some of their high schools. It also gives tables of the two groups, the recitation group and the supervised group, and shows the result in achievement in each case.

Burr, A. W. How Supervised Study is Doing School Review, Vol. 32, N. 3.

Gives both the advantages and the disadvantages of supervised study as it has been carried out in certain schools. Suggests such improvements in supervision of study that will be of advantage to the pupil.

Kilzer, L. R. Fifteen Reasons Why Some Supervised Study Fails American School Board Review, December, 1931.

The writer gives the teacher's lack of efficiency as the basis for failure of supervised study. To quote some of his reasons: 1. "Failure to understand the meaning of supervised study." 2. "Lack of training in that work". 3. "Lack of sympathy in the work". 4. "Class management and individual differences in students have failed to be provided for".

Morrison, H. C. Supervised Study School Review, Vol. 32, No. 5.

The writer treats of the unit plan of supervised study and outlines the program step by step. This is the plan of supervised study most commonly used in the larger high schools.

Other books that have proved useful

Colvin, S. S. An Introduction to High School Teaching

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