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## Equipment in the Schools of Mclean County County, North Dakota

Albert Irving Peterson

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EQUIPMENT IN THE SCHOOLS  
OF MCLEAN COUNTY, NORTH DAKOTA

A Thesis  
Submitted to the Faculty of the Graduate School  
of the  
University of North Dakota

by  
Albert Irving Peterson  
In Partial Fulfillment of the Requirements  
for the Degree of  
Master of Science in Education  
February, 1940

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This thesis, submitted by Albert Irving Peterson in partial fulfillment of the requirements for the degree of Master of Science in Education, is hereby approved by the Committee of Instruction in charge of his work.

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#### ACKNOWLEDGMENT

The writer wishes to acknowledge his sincere appreciation for the encouragement and helpful guidance of Dr. A. V. Overn, Professor of Education of the University of North Dakota.

Special acknowledgment is due to Mrs. Pauline Peterson who compiled much of the data and edited the manuscript.

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## CHAPTER 1

### INTRODUCTION

A school system is as strong as its weakest school. The rural school has long been recognized as the weakest link in the educational school system. This study will deal particularly with certain phases of that type of school.

In checking through the records in the county superintendent's office in McLean County, North Dakota, it was found that an unusually large number of rural pupils failed in the seventh and eighth grade state examinations. In some schools, students were repeating the tests for the third and fourth time. It was also discovered that, in some districts, but few pupils attended high school after completing the elementary school. Of those who did attend high school, many failed the first year. At Garrison High School, where all pupils were given the Kuhlman-Anderson achievement tests, the rural pupils scored lower than the pupils who had completed the elementary grades in the village schools.

#### Justification of the Study

These observations would lead one to believe that the rural schools were less efficient. This study dealt particularly with the equipment in the rural schools of one North Dakota county, McLean, with the hope that some light might be thrown upon the solution of the rural school problem already mentioned.

#### Sources of Information

The following sources of information were used to secure the data and facts used in this study, together with the observations of the

writer while serving in the capacity of county superintendent of schools of McLean County.

1. Inventory of textbooks for the years of 1933-34, 1935-36 and 1937-38.
2. Check list of equipment in the schools made by the county superintendent while visiting the schools during the years from January 1, 1931 to January 1, 1939.
3. County Superintendent's annual reports for the years 1924 to 1938.
4. Teachers' final reports for the years 1931 to 1938.
5. Clerk's and Treasurer's annual reports for the years 1924 to 1938.
6. Results of seventh and eighth grade final examinations for the years of 1931 to 1938.
7. Reading ability tests given to the sixth, seventh and eighth grade pupils in the rural schools in November, 1937 and again in March, 1938. The scores made by the pupils were arranged in frequency tables and the mean score for each district calculated.

#### Method of Procedure

Inventory forms for textbooks were prepared in the office of the county superintendent of schools and mailed to all teachers in the rural one-room and consolidated schools. Teachers were instructed to fill in the forms, following the simple directions given on each. A period covering nearly one school term elapsed before all the inventory forms had been completed and returned to the county superintendent's office.

Since the work required considerable detail work on the part of the teachers, extra time was given them to make it possible for each one to work on the report whenever time was available.

In making the inspection of each school, which occurred at least once during each school year, the county superintendent checked the various items of equipment with a view toward recommending certain schools which qualified for classification as state aided schools. Although no money was offered to the districts after the failure of the 1933 legislature to provide funds, many of them took pride in maintaining the same standard as before.

A summary of both the teachers' final reports and the reports of the clerks and treasurers can be found in the county superintendent's annual report to the department of public instruction. This annual report was the source of information in regard to the cost of textbooks over a period of years.

While the county superintendent's report covered the various items for each district, in some cases it was necessary to find information in regard to each school. For such information the best sources were the teachers' final reports.

The clerk's and treasurer's annual reports were often easier to work with, and contained facts which could not always be included in the annual report of the county superintendent.

Seventh and eighth grade examinations are prepared semi-annually by the department of public instruction at Bismarck, and are sent to each county superintendent, who relays them to each teacher for administration. Upon completion of the examination by the pupils, the

teacher corrects the papers and returns them to the office of the county superintendent, whose duty it is to give a final grade for each paper and to issue completion certificates in each subject and diplomas to those pupils who have completed all the subjects required for graduation from the eighth grade.

The number of failures per subject and the number of diplomas issued, based upon the number of pupils taking the examinations, offer a means of measuring the educational temperature of any district. The first was used in this study.

Reading ability tests were administered to the sixth, seventh, and eighth grade pupils in all the rural schools. From these tests it was possible to judge, in a general way, the reading ability of the pupils in the schools and to rate each district against all others in the county. These tests were secured from Educational Publishers, 654 Normal Avenue, Valley City, North Dakota.

#### Limitations

Complete inventories were taken in all the rural schools of the county, except four which will be mentioned later, rather than taking them from only a sampling of schools. The inventories were made as simple as possible, in order that no teacher would find it too difficult to fill in the information requested, or find the work too burdensome in the time consumed. The forms aimed to save unnecessary work for the teachers who were to fill them out.

The data concerning the textbooks may be considered as fairly accurate with regard to the copyright date of each, since that could be ascertained by looking at the date shown in the text, except when the

books were badly torn and the title page had been torn out. Usually other books in the same series would give this information.

There may be considerable variation in judging when a textbook is torn or badly mutilated. To make such judgment uniform, the evaluation should be done by one person or a small group which is skilled in estimating the condition of textbooks. Since each teacher evaluated the condition of her own texts, there might be some variation in judgments. However, when the inventories were classified as indicating "good" and "poor and very poor" conditions of textbooks, differences on individual judgments would not detract appreciably from the accuracy of the evaluation given.

A further limitation should be noted in the accuracy of the testing of pupils in reading ability. In a previous testing program in certain of the schools of the county with the Kuhlman-Anderson standardized test it was found that certain teachers who lacked training in giving the tests, failed to administer them according to instructions. Thus the results were rendered unusable. Hence, in this later testing, a very simple test was used, which had a minimum of instructions to follow and required a minimum of ability and training for its administration.

In a rural school it was found difficult to get proper separation of grades. The test used in reading permitted the teacher to give undivided attention to administration, since three grades' tests were given at one time.

The matter of expense entered strongly in the matter of purchasing tests, thus making it necessary to secure a test at a minimum

of cost and to limit the testing to the sixth, seventh, and eighth grades of the rural schools.

No effort was made to secure inventories from the village schools for the 1935 survey. Rural consolidated schools furnished all information requested. The 137 one-room rural schools returned inventories, except four. Of these four, two were located in district number one, which is a special district in which the village school superintendent has jurisdiction over the rural schools, in addition to other duties. No uniformity suitable for listing was possible. Teachers listed only "desk" copies on the inventories. The teacher in school number two of district number one added the following note: "The children buy their own texts. Most of their books are in very bad condition."

District number eighty-six, with one rural school, sent no inventory for 1935, due to a change in teachers during the term and a general disrupted condition throughout the school year. District number eighty-seven, with one rural school, sent no inventory, due to a change in teachers during the school year.

District number eighty-eight, with one rural school, was a newly organized district, with the school opening for the first time about the middle of the year. At the time the 1935 inventories were made out the new supplies had not reached the school. In view of this fact, the inventory did not present a true condition for this school; hence, the number of reader textbooks per grade was not used in calculating the correlations in chapter five of this study.

For the 1938 inventories, replies were received from all the

schools in the county, except textbook inventories for village districts number fifty-six and seventy-two, although several follow-up letters were sent. Inventories for the village schools were handled through the local superintendent, on forms furnished by the county superintendent's office. Tabulation of the 1938 inventories is not included in detail in this study. Only totals are compared with the totals of the 1935 inventories in chapter six. The 1935 inventory can be found in detail in chapter three.

It is possible that some errors may have been made by teachers in correcting the reading tests given to the rural pupils, although each was provided a key. It is also possible that teachers may have aided pupils in answering the questions, or changed replies made by the pupils after the tests were written. To be completely reliable, the reading tests should be given by a disinterested person who had special training in giving tests, thus insuring, as nearly as possible, identical conditions for each group.

Teachers might have aided pupils in the seventh and eighth grade state examinations - in fact, several definite cases of this were reported and investigated - one resulting in a hearing by representatives of the Department of Public Instruction, for the purpose of considering the revocation of the teacher's certificate. Attempts on the part of the county superintendent to have disinterested teachers give the final state examinations did not meet with favorable response on the part of the school boards.

It must be recognized that to use only the number of sets of readers per grade is not an adequate criterion on which to judge a



school. The condition of the texts should be considered, as well as the ability of the teacher to offer additional supplementary material, the general effectiveness of classroom instruction, and the native ability of the pupils. In search for a score card for equipment in an elementary school, a letter of inquiry was directed to Columbia University in New York, to which the reply stated that such a score card was "not their publication," and no reference was given where one might be obtained. As far as could be learned from other inquiries, no score card for the equipment in an elementary school has been devised.

To be completely effective, a score card should be used which evaluates all the influences that are brought to bear upon a pupil. In this study, only three of many were used, namely, the number of sets of readers per grade, the number of readers per grade, and the eighth grade completions. The first two were determined from inventories submitted by the teachers in the schools, and may therefore deviate, depending upon the amount of painstaking effort each teacher was willing to contribute.

This study approached a field that, so far as could be learned, had not been explored in similar effort. All forms used are entirely new, as well as the criteria set up for comparison, with the exception of the reading test scores and the results of the state examinations. No guides for organizing the material or approach to the subject were discovered.

## CHAPTER 2

## EQUIPMENT IN THE PUBLIC SCHOOLS OF MCLEAN COUNTY

Efficiency of the public schools is partly dependent upon both the quality and the quantity of equipment used. Good business judgment would place the purchasing of the equipment in the hands of those who are experienced in judging the effect of various kinds upon the success of the pupils in their learning. The selection of equipment requires technical skill and knowledge of its quality, price and possible use. The teacher in the rural school and the teacher, principal, and superintendent together in the urban situation are the best qualified to recommend equipment to the board of education for purchase.

It was found that no study had been made, in North Dakota, covering the equipment in all the schools of any county. The fulfillment of the provisions of law covering the purchase of equipment is necessary to the efficient operation of the schools. To determine the exact effect which equipment has on a given situation would be difficult; but facts which can be ascertained should be known by those who pay the taxes for the operation of their schools, as well as by those who have direct charge of the schools.

It was found that school boards were generally following the law in the matter of purchasing equipment. In some cases the district boards refused to purchase equipment, even after the approval of the county superintendent had been given; in others, the boards made their own selection of equipment without approval; while, in a few cases, the teacher aided in the selection of the equipment. It was found that, in a few cases, boards selected library books without the aid

of the teachers, and disregarded the list recommended by the state superintendent. The common sin, however, was one of omission rather than commission.

The North Dakota law "in theory" places the approval of equipment in the hands of the County Superintendent of Schools, as stated in Section 113 of the State of North Dakota General School Law for 1935:

"The district school board shall, with the approval of the County Superintendent of Schools, furnish to each school all necessary and suitable furniture, maps, charts, globes, blackboards, and other school apparatus, including any dictionary which is recognized as a standard authority. The school register and all other blanks shall be those furnished by the State Superintendent of Public Instruction. It shall appropriate and expend each year not less than ten dollars (\$10.00) or more than twenty-five dollars (\$25.00) for each school of the district for the purpose of school library, to be selected by the school board and the teachers from any list of books authorized by the Superintendent of Public Instruction, and furnished by him to the County Superintendent for that purpose; provided that all books purchased for the library shall be bound in cloth or some material equally as durable; provided, further, that when a school board of a common school has purchased and has in their library two hundred books as afore provided, that the school board, having such school under their supervision, shall be obliged to expend not less than five dollars (\$5.00), annually, until such library shall contain, in good condition, three hundred volumes, after which said school board shall not be obliged to purchase so as to increase the number, but shall keep the books in good condition, and replace annually as many books as may become lost or destroyed."

In the districts where the choice of textbooks was made by the teachers or the school board, textbooks lacked uniformity. This prevented the exchange of textbooks among the several schools of the district, and added to the expense of operating the schools. Resistance to the purchase of new textbooks was voiced by some boards for the reason that there were enough books in the schools. Such boards

did not have the necessary training properly to evaluate the textbooks for quantity, quality, style, factual material, appeal to the child, or conformity with the course of study.

Some of the other required equipment, besides textbooks, was found to be entirely lacking or out of date. More than one-half of the rural schools had less than the requirements of the third class rural school (Table 1), the lowest group for classification of rural schools.

Table 1  
Requirements for Standard Rural Schools for State Aid  
1931

	Teacher	Certif- icate	Term	Toilets Light	Map Globe	Library	Readers	General Requirements
1st class rural of normal school	Grad- uate	2nd prof.	9 mos. Stove with jacket Fresh air vent Foul air out- let	Inside One side or one side and rear	8 maps in- clud- ing state map Globe	150 books 1 large, 5 small diction- Encyclo- pedia, 10 volumes	4 sets for first 6 grades	Flag 2 wash basins Sanitary soap Paper towels Drinking fountain 75% attend- ance  Receives ap- proximately \$108.00
2nd class rural 24 weeks normal school	High school	1st elem.	9 mos. Stove with jacket Fresh air vent Foul air out- let	Out- side with storm sheds One side or one side and rear	8 maps in- clud- ing state map Globe	150 books 1 large 5 small diction- aries Encyclo- pedia, 10 volumes	4 sets for first 6 grades	Flag 2 wash basins Sanitary soap Paper towels Drinking fountain 75% attend- ance  Receives ap- proximately \$86.00

Table 1 (Continued)

Teacher	Certif- icate	Term	Toilets Light	Map Globe	Library	Readers	General Requirements
3rd class rural school	2nd elem.	8 mos.	Out- side	8	100	4 sets	Flag
		Stove with jacket Fresh air vent Foul air out- let	with storm sheds One side or one side and rear	in- clud- ing state map Globe	books 1 large, 5 small diction- aries Encyclo- pedia, 10 volumes	for first 6 grades	2 wash basins Sanitary soap Paper towels Drinking fountain 75% attend- ance  Receives ap- proximately \$65.00

## Rural School Equipment

Enumeration of equipment can best be shown by comparison with some standard. The McLean County inventories for 1938 show that about one-half of the rural schools in McLean County had reached most of the standards set up by the North Dakota legislature for a third class rural school (Table 2), and had improved their 1935 rating.

Table 2

The Percentage of Rural Schools in McLean County in  
Which the Equipment Met the Standards of a  
Third Class Rural School  
1935 and 1938

Per Cent of Schools Reaching Standard		Items Required for Third Class Rural School
1935	1938	
21	44	One large and five small dictionaries
45	71	Encyclopedia (World Book or Compton's)
30	50	Maps: seven continental-physical-political and large state map

Table 2 (Continued)

Per Cent of Schools Reaching Standard		Items Required for Third Class Rural School
1935	1938	
66	91	Globe: twelve-inch suspension
42	60	Blackboards: one hundred square feet
45	50	Heating and ventilating systems
24	80	Sanitary facilities: indoor or outdoor with storm shed, vents, etc.
50	55	Play equipment

It was found on the 1938 inventories that fifty-one per cent of the textbooks of the county rural schools bore copyright dates of 1930 or later, and about one-third of the pupils had access to "Reading Circle" library books.

Textbooks and equipment were lacking in schools, for no apparent reason, other than neglect. The expenditures for textbooks and equipment is such a small item of the total expenditure that money spent for these important teaching tools could be increased, without seriously disrupting budgets or increasing tax burdens (Table 3). For McLean County, the cost of textbooks for the year ending June 30, 1938, was less than three per cent of the expenditures--actually, 2.80 per cent.

Table 3  
Expenditure for All the School Districts in McLean  
County for the Year Ending June 30, 1938

Item	Amount	Per Cent
Teachers' salaries	\$ 149,999.25	46.94
Debt service (certificates of indebtedness paid and interest on C. of I. and warrants)	38,374.39	11.98
Bonds and interest paid	38,190.27	11.92

Table 3 (Continued)

Item	Amount	Per Cent
Operation of plant (fuel, light, water, janitor's wages and supplies, misc.)	\$ 23,642.31	7.48
Auxiliary agencies (transportation, tuition, health, play equipment, hot lunches, misc.)	21,749.06	6.89
Textbooks	8,930.31	2.80
General control (school officers' salaries and expense, misc.)	8,746.57	2.73
Maintenance of plant (repairs to building, upkeep of grounds, repairs to equipment, misc.)	8,700.12	2.82
Capital outlay (new sites, new buildings, new equipment, misc.)	7,511.27	2.45
Teaching supplies	5,118.56	1.59
Fixed charges (insurance, rent, misc.)	4,251.79	1.45
Library books	2,821.79	.88
Revolving fund	1,517.40	.05
Miscellaneous	665.75	.02
<b>Totals</b>	<b>\$ 320,269.06</b>	<b>100.00</b>

### Library

The requirements for library books, as set forth in Section 113 of the North Dakota Revised 1935 School Law (see page 10):

"It shall appropriate...for each school of the district for the purpose of school library...from any list of books authorized by the Superintendent of Public Instruction...; provided, further, that when a school board of a common school has purchased and has in their library two hundred volumes as afore provided,...shall be obliged to expend...until such library shall contain, in good condition, three hundred volumes."

The list of books authorized by the Superintendent of Public Instruction is known as North Dakota Bulletin Number Five. No school in the County had met the above requirements for library.

Reading Circle Awards are provided by the Department of Public Instruction for pupils who join the pupils' Reading Circle. To qualify for a Pupils' Reading Circle award, a pupil must read two books a month from the approved list (Bulletin Number Five) for each month school is

in session. One-half the books read must be approved for the pupils' own grade, and one-half may be from books approved for the grade immediately above or immediately below. A school must therefore have, at least, an average of eight or nine books (depending upon term length) for each grade in order to permit pupils to earn the Pupils' Reading Circle award. In addition to the Reading Circle awards, pupils completing the required number of books have ten per cent added to their grade in reading.

Setting only nine books per grade as a minimum requirement, ten out of fifty-two rural, and seven out of ten village school districts in McLean County had sufficient numbers of library books.

On the basis of eighteen library books per grade, thus permitting students to read two books per month from their own grade list, none of the rural, and four of the village, school districts reached this standard. Table 4 and Table 5 indicate the district number, the number of schools in each district, the total number of library books in each district, the number of library books per school and the number of library books per grade, as submitted by teachers on inventories for the school year ending in June, 1938.

Table 4

Library Books in the Rural Schools of McLean County,  
Selected from North Dakota Bulletin Number Five  
1938

District Number	Number of Schools in District	Total Number of Books in District	Number of Books per School	Number of Books per Grade
2	2	141	70	9
3	2	83	41	5
5	2	117	58	7



Table 4 (Continued)

District Number	Number of Schools in District	Total Number of Books in District	Number of Books per School	Number of Books per Grade
6	3	203	67	8
9	4	129	32	4
10	4	245	61	8
11	4	253	62	8
21	3	130	43	5
22	3	129	43	5
24	2	119	59	8
26	3	205	68	9
27	1	55	55	7
28	4	156	52	7
31	3	146	49	6
36	4	142	35	4
38	4	165	41	5
39	1	81	81	10
40	3	106	35	4
44	3	170	57	7
46	3	167	56	7
47	4	167	42	5
48	3	151	50	6
51	1	35	35	4
52	4	207	52	6
53	3	269	89	11
54	4	78	19	2
57	4	174	43	5
58	3	211	70	9
59	1	65	65	8
60	2	93	46	6
62	1	13	13	2
63	3	117	39	5
64	1	96	96	12
65	3	180	60	8
66	2	142	71	9
67	2	108	54	7
68	2	75	37	5
69	2	114	57	7
70	3	119	39	5
71	1	19	19	2
73	1	133	133	17
74	3	177	59	7
75	4	172	43	5
76	1	103	103	14
77	3	184	61	8
78	2	53	26	3
80	2	58	29	4
81	3	200	67	8

Table 4 (Continued)

District Number	Number of Schools in District	Total Number of Books in District	Number of Books per School	Number of Books per Grade
82	1	52	52	6
83	4	169	42	5
84	2	108	54	7
85	1	58	58	7
86	1	77	77	9
87	1	117	117	14
88	1	28	28	3
Total		7071	Average 52	Average 6.72
Number districts reported 55.				
Number schools reported 137				

Village schools are located in districts fifty-one, sixty-two and sixty-seven, from which the rural schools may borrow library books; hence, the number of books shown on this inventory may not represent the books readily available.

Several district school boards made regular allowance for postage on books borrowed from the State Library Commission at Bismarck. In some districts, money for postage was obtained from school function proceeds, or was furnished by the teacher.

The number of library books per grade range from seventeen to two, with an average of 6.72. Only six rural school districts had more than nine library books per grade, while three village school districts (Table 5) fell below this standard.

No attempt was made to secure inventories of other books in school libraries. Most of the books not listed in Bulletin Number Five were of doubtful educational value. Listing such books only tends to give a false impression of quantity, and not quality.

In some districts the schools exchanged library books. Children

in these schools may have had more books available than the number shown on the inventories.

Table 5

## Library Books in the Village Schools of McLean County,

Selected from North Dakota Bulletin Number Five

1938

District Number	Number of Schools in District	Total Number of Books in District	Number of Books per School	Number of Books per Grade
1	1	201	201	25
4	1	208	208	26
7	1	90	90	11
8	1	39	39	5
50	1	95	95	12
51	1	545	545	68
56	1	21	21	3
62	1	93	93	12
67	1	60	60	8
72	1	144	144	18
Total		1496	Average 149.6	Average 18.9
Number of districts reported		10		
Number of schools reported		10		

Library books in the village schools of McLean County ranged from three per grade in district number fifty-six, to sixty-eight in district number fifty-one. In district number fifty-one recent large purchases of library books to meet classification standards provided a special stimulus not found in ordinary situations.

The average number of library books per grade was 18.9. Disregarding the figure for district number fifty-one, the average number of library books in the village schools was 13.33 books per grade, as compared to 6.72 books per grade for the rural schools.

### Summary of Chapter 2

The purpose of this study was to determine the number, type and quality of pieces of equipment in use in the schools of McLean County, North Dakota. Standards for equipment are those established by the legislature of North Dakota in setting up requirements for classified school aid, which provided for regulations prescribed by the department of public instruction.

Standards used in practice are set up by each school board. Apparently standards set up by law were ignored for no rural district was found which met the legal requirements for library books; only three districts were found to contain one hundred volumes of library books per school required to meet the standards for a third class rural school.

State standards for other pieces of equipment were ignored by school boards. The percentage of schools meeting the state standards of a third class rural school on eight items ranged from forty-four to ninety-one per cent. The percentage of schools reaching the standard set up for a third class rural school on eight items was forty-four per cent providing the standard number of dictionaries; seventy-one per cent had encyclopedias, fifty per cent had maps, ninety-one per cent had globes, sixty per cent had blackboards, fifty per cent had heating and ventilating systems, eighty per cent had sanitary facilities and fifty-five per cent had play equipment.

## CHAPTER 3

## INVENTORY OF TEXTBOOKS

The inventories submitted by the rural school teachers in 1935 were tabulated by districts. Inventories were likewise taken in 1938 but those for 1935 are shown for the reason that the condition of books at that time reveals a more typical situation. Most of the districts had made considerable improvement in the textbooks during the three-year period but the effect of poorer textbooks would still be evident in work done by the pupils.

The inventories for 1935 have been tabulated according to subjects with the tables showing the number of the district, the number of schools in each district, the total number of textbooks for each subject, the number good, the number poor, the number very poor, the percentage good, the percentage poor, and the percentage very poor. The table showing the inventories of readers (Table 6) has a special column showing the number of sets of reader textbooks per grade per school.

Table 6

## Reading Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total Reading Text- books	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	Sets of Readers per Grade per School
2	2	111	41	31	39	37	28	35	4.00
3	2	127	63	61	3	50	48	2	3.20
5	2	107	43	56	8	40	52	8	2.67
6	2	107	68	27	12	64	25	11	2.50
9	4	229	62	148	19	27	65	8	3.58

Table 6 (Continued)

Dis- trict Number	Number of Schools	Total Reading Text- books	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	Sets of Readers per Grade per School
10	4	217	80	117	20	37	54	9	3.54
11	5	150	46	87	17	31	58	11	2.10
21	2	58	43	15	0	74	26	0	2.00
22	3	225	67	94	64	30	42	28	3.89
24	3	94	27	51	16	29	54	17	2.56
26	2	96	35	55	6	37	57	6	2.83
27	1	84	4	36	44	5	43	52	3.83
28	4	256	79	97	80	31	38	31	3.08
31	3	187	53	119	15	28	64	8	4.00
36	3	105	38	47	20	36	45	19	2.33
38	4	172	30	105	37	17	61	22	2.75
39	2	89	34	41	14	38	46	16	2.50
40	4	222	71	83	68	32	37	31	3.21
44	3	235	61	149	25	26	63	11	3.50
46	3	158	71	59	28	45	37	18	3.61
47	3	165	72	32	61	44	19	37	2.56
48	4	207	10	156	41	5	75	20	3.29
51	1	107	10	97	0	9	91	0	4.00
52	3	142	15	84	43	11	59	30	2.33
53	4	327	99	178	50	30	55	15	4.25
54	4	134	52	31	51	39	23	38	2.29
57	4	247	76	146	25	31	59	10	3.38
58	2	94	49	39	6	52	42	6	3.83
59	1	132	45	34	53	34	26	40	3.83
60	3	261	33	175	53	13	67	20	3.95
62	2	66	3	57	6	5	86	9	1.75
63	3	215	37	170	8	17	79	4	3.39
64(C)	1	137	7	60	70	5	44	51	3.00
65	3	240	56	94	90	23	39	38	3.72
66	2	197	25	149	23	13	75	12	4.75
67	2	102	27	39	36	27	38	35	2.67
68	2	143	35	67	41	24	47	29	3.67
69	3	140	32	44	64	23	31	46	2.83
70	3	189	70	119	0	37	63	0	2.72
71	1	56	33	9	14	59	16	25	3.33
73(C)	1	125	42	50	33	34	40	26	3.75
74	4	310	153	152	5	49	49	2	4.29
75	4	344	54	216	74	16	63	21	4.61
76(C)	1	408	67	183	158	16	45	39	6.83
77	3	249	128	109	11	51	44	5	4.22
78	2	134	61	47	26	46	35	19	3.00
80	2	143	41	67	35	29	47	24	4.50
81	3	239	88	92	59	37	38	25	3.61

Table 6 (Continued)

Dis- trict Number	Number of Schools	Total Reading Text- books	Number			Per Cent Good	Per Cent Poor	Per Cent Very Poor	Sets of Readers per Grade per School	
			Good	Poor	Very Poor					
82	1	57	14	43	0	25	75	0	4.00	
83	2	140	51	79	10	36	57	7	4.00	
84	2	76	28	32	16	37	42	21	1.67	
85	1	35	18	17	0	51	49	0	2.33	
88	1	30	27	3	0	90	10	0	1.33	
Totals		8620	2574	4348	1698					
						Average	30	50	20	3.31

Districts Reported 53

Rural Schools 134

Rural Consolidated Schools 3

The number of sets of readers per grade per school for the first six grades was derived in the following manner: the number of different sets listed for each school in the district was counted, added together, the total obtained divided by the number of schools in each district, then divided by six. The first six grades are those in which reading is taught as a formal subject. State standards call for four sets of readers for each grade up through the sixth. Educators agree that enough readers should be supplied to give ample reading material, which may be far in excess of the number called for on state standards.

The proportion of "good" books in reading ranged from five per cent, in districts number twenty-seven, forty-eight and sixty-two, to ninety per cent in district number eighty-eight, a newly organized district, where purchases had been made recently. The proportion of "very poor" books ranged from zero, in six districts, to fifty-two per cent in district number twenty-seven. The proportion of "poor" books ranged

from ten per cent in district number eighty-eight to ninety-one per cent in district number fifty-one.

The average ratio of "good" readers was thirty per cent while that of "poor" was twenty per cent. This would indicate that more than one and one-half times as many readers were considered good as compared with the very poor, while those considered poor included fifty per cent of all readers.

When compared with the requirements for a third class rural school (four sets of readers per grade for the first six grades), only five districts, or nine per cent of all the rural districts in McLean County, reached the standard; and only seven districts, or thirteen per cent, exceeded the standard. The five districts reaching the standard include nine of the rural schools, or six per cent; the seven districts exceeding the standard include nineteen, or fourteen per cent, of the rural schools and one of the consolidated schools.

#### Language and Literature

The proportion of "good" books in language and literature ranged from 100 per cent, in district number eighty-eight, to zero in districts fifty-one and fifty-nine; the average found was twenty-five per cent (Table 7). "Poor" books listed ranged from 100 per cent, in district fifty-one, to zero in districts eighty-five and eighty-eight.

Good books in language and literature were twenty-five per cent, poor books were fifty-seven per cent and very poor books eighteen per cent.



Table 7  
Language and Literature Textbooks in McLean County Rural  
Schools, 1935

Dis- trict Number	Number of Schools	Total Language and Literature Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	42	12	30	0	29	71	0
3	2	43	15	28	0	35	65	0
5	2	40	30	4	6	75	10	15
6	2	30	16	11	3	53	37	10
9	4	96	4	82	10	5	85	10
10	4	81	20	51	10	25	63	12
11	5	57	32	20	5	56	35	9
21	2	31	21	7	3	68	22	10
22	3	78	15	41	22	19	53	28
24	3	31	3	28	0	10	90	0
26	2	55	13	14	28	24	25	51
27	1	19	6	5	8	32	26	42
28	4	112	13	43	56	12	38	50
31	3	41	8	29	4	19	71	10
36	3	70	5	56	9	7	80	13
38	4	71	3	64	4	4	90	6
39	2	35	8	27	0	23	77	0
40	4	97	26	29	42	27	30	43
44	3	83	17	63	3	20	76	4
46	3	67	24	30	13	36	45	19
47	3	69	10	40	19	15	58	27
48	4	62	13	47	2	21	76	3
51	1	17	0	17	0	0	100	0
52	3	66	20	26	20	30	40	30
53	4	94	24	70	0	26	74	0
54	4	35	6	27	2	17	77	6
57	4	63	19	42	2	30	67	3
58	2	49	6	37	6	12	76	12
59	1	29	0	23	6	0	80	20
60	3	73	10	59	4	14	81	5
62	2	33	10	23	0	30	70	0
63	3	70	20	47	3	29	67	4
64(0)	1	54	4	18	32	7	33	60
65	3	62	17	20	25	27	33	40
66	2	54	3	51	0	6	94	0
67	2	39	17	14	8	44	36	20
68	2	55	10	37	8	18	67	15
69	3	46	3	17	26	7	37	56
70	3	54	13	18	23	24	33	43

Table 7 (Continued)

Dis- trict Number	Number of Schools	Total Language and Literature Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	
71	1	18	5	13	0	28	72	0	
73(C)	1	60	27	33	0	45	55	0	
74	4	63	23	39	1	36	62	2	
75	3	78	30	33	15	39	42	19	
76(C)	1	66	18	35	13	27	53	20	
77	3	57	13	37	7	23	65	12	
78	2	40	10	6	24	25	15	60	
80	2	27	15	10	2	55	37	8	
81	3	76	11	57	8	14	75	11	
82	1	7	2	5	0	29	71	0	
83	2	39	9	21	9	23	54	23	
84	2	48	25	6	17	51	13	36	
85	1	10	2	0	8	20	0	80	
88	1	11	11	0	0	100	0	0	
Totals		2803	697	1590	516				
						Average	25	57	18

Districts Reported 53  
 Rural Schools Reported 134  
 Rural Consolidated Schools 3

An important feature of textbooks in language and literature is the continuity of the series, so that all phases of the subject can be presented as the pupils move through the different grades. In situations where pupils are required to write examinations of the essay type the thoroughness with which language and literature has been taught will have a great deal of bearing upon their future success in school work. More noticeable will be the work required of those who enter vocations requiring the composition of letters, or advertising matter.

In addition to the regular textbooks in language and literature much material can be found in supplementary texts, current literature

and the classics. However, for the rules of grammar or sentence structure, the use of a textbook is almost a necessity for conducting a class in this subject.

#### Arithmetics Better Than Other Texts

Forty-seven per cent of the arithmetic textbooks were reported "good;" twenty-nine per cent were reported "poor" and twenty-four per cent "very poor" (Table 8). This condition of arithmetic textbooks would indicate that the newer three-book-series had been provided for nearly half of the schools.

Table 8

#### Arithmetic Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total Arith- metic Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	17	4	9	4	23	53	24
3	2	25	13	12	0	52	48	0
5	2	24	12	12	0	50	50	0
6	2	27	16	5	6	59	19	22
9	4	67	22	7	38	33	10	57
10	4	87	41	34	12	47	39	14
11	5	39	22	8	9	56	21	23
21	2	34	30	4	0	88	12	0
22	3	51	5	14	32	10	27	63
24	3	33	4	26	3	12	79	9
26	2	29	5	15	9	17	52	31
27	1	14	5	0	9	36	0	64
28	4	97	33	23	41	34	24	42
31	3	36	27	9	0	75	25	0
36	3	37	0	18	19	0	49	51
38	4	77	16	44	17	21	57	22
39	2	35	18	13	4	51	37	12
40	4	76	37	20	19	49	26	25
44	3	75	58	10	7	77	13	10
46	3	40	23	15	2	57	38	5
47	3	71	47	12	12	66	17	17
48	4	46	13	26	7	28	57	15

Table 8 (Continued)

Dis- trict Number	Number of Schools	Total Arith- metic Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	
51	1	21	18	0	3	86	0	14	
52	3	42	8	8	26	19	19	62	
53	4	69	26	36	7	38	52	10	
54	4	50	30	12	8	60	24	16	
57	4	58	19	32	7	33	55	12	
58	2	44	21	23	0	48	52	0	
59	1	25	25	0	0	100	0	0	
60	3	47	14	12	21	30	25	45	
62	2	22	0	15	7	0	68	32	
63	3	60	34	12	14	57	20	23	
64(G)	1	45	10	22	13	22	49	29	
65	3	57	12	15	30	21	26	53	
66	2	42	10	20	12	24	48	28	
67	2	29	10	14	5	35	48	17	
68	2	43	6	9	28	14	21	65	
69	3	49	13	18	18	28	36	36	
70	3	59	44	10	5	75	17	8	
71	1	15	9	6	0	60	40	0	
73(G)	1	44	44	0	0	100	0	0	
74	4	75	31	23	21	41	31	28	
75	4	104	77	6	21	74	6	20	
76(G)	1	93	70	11	12	75	12	13	
77	3	46	26	18	2	57	39	4	
78	2	28	16	0	12	57	0	43	
80	2	21	17	4	0	81	19	0	
81	3	72	23	23	26	32	32	36	
82	1	9	6	0	3	67	0	33	
83	2	46	15	8	23	33	17	50	
84	2	44	22	3	19	50	7	43	
85	1	18	11	0	7	61	0	39	
88	1	16	16	0	0	100	0	0	
Totals		2430	1134	696	600				
						Average	47	29	24

Districts Reported 53

Rural Schools Reported 134

Rural Consolidated Schools 3

A larger percentage of "good" books was found in the arithmetic inventories than in those of any other subject. In addition to regular

textbooks, workbooks, practice pads and other teaching aids were provided in some districts. No definite reason can be given for the willingness of school boards to provide up-to-date textbooks in a subject that has changed but little through the years. Perhaps their attitude may be attributed to the fact that school officers can "understand" arithmetic or can see its practical application.

### Spelling

Slightly over one-fourth of the districts reported spelling textbooks in good condition (Table 9). The proportions found were twenty-nine per cent good, fifty-four per cent poor and seventeen per cent very poor.

Table 9  
Spelling Textbooks for the Rural Schools of McLean County  
1935

Dis- trict Number	Number of Schools	Total Spelling Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	6	2	4	0	33	67	0
3	2	23	0	23	0	0	100	0
5	2	10	5	5	0	50	50	0
6	2	19	5	14	0	26	74	0
9	4	38	1	21	16	3	55	42
10	4	23	1	0	22	4	0	96
11	5	18	5	9	4	28	50	22
21	2	19	19	0	0	100	0	0
22	3	30	6	24	0	20	80	0
24	3	7	4	0	3	57	43	0
26	2	26	10	16	0	38	62	0
27	1	1	1	0	0	100	0	0
28	4	64	1	43	20	2	67	31
31	3	17	11	6	0	65	35	0
36	3	26	3	23	0	12	88	0
38	4	11	2	9	0	18	82	0
39	2	14	1	3	10	7	21	72
40	4	49	17	23	9	35	47	18

Table 9 (Continued)

District Number	Number of Schools	Total Spelling Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
44	3	47	0	47	0	0	100	0
46	3	26	5	4	17	19	15	66
47	3	27	6	17	4	22	63	15
48	4	24	0	21	3	0	88	12
51	1	18	0	18	0	0	100	0
52	3	45	11	24	10	25	53	22
53	4	52	16	21	15	31	40	29
54	4	22	5	11	6	23	50	27
57	4	20	4	16	0	20	80	0
58	2	20	3	17	0	15	85	0
59	1	32	1	31	0	3	97	0
60	3	39	4	22	13	10	57	33
62	2	21	0	21	0	0	100	0
63	3	23	9	11	3	39	48	13
64(C)	1	61	45	16	0	74	26	0
65	3	52	19	19	14	37	37	26
66	2	25	0	24	1	0	96	4
67	2	10	0	10	0	0	100	0
68	2	10	2	8	0	20	80	0
69	3	11	2	7	2	18	64	18
70	3	8	8	0	0	100	0	0
71	1	9	2	7	0	22	78	0
73(C)	1	20	0	20	0	0	100	0
74	4	49	38	5	6	78	10	12
75	4	31	15	11	5	48	36	16
76(C)	1	14	13	1	0	93	7	0
77	3	29	4	11	14	14	38	48
78	2	13	5	0	8	38	0	62
80	2	2	1	1	0	50	50	0
81	3	35	25	0	10	71	0	29
82	1	2	2	0	0	100	0	0
83	2	17	1	16	0	6	94	0
84	2	44	10	34	0	23	77	0
85	1	1	1	0	0	100	0	0
88	1	13	13	0	0	100	0	0
Totals		1273	364	694	215			
					Average	29	54	17

Districts Reported 53

Rural Schools Reported 134

Rural Consolidated Schools 3

In no other subject did so many districts possess 100 per cent "good" textbooks as in spelling; yet, the six districts so reporting included only nine, out of a total of 134, rural schools. The picture may not be significant, due to the fact that many schools do not use regular spelling textbooks, but give drill on words used in other subjects. Spelling workbooks were widely in use throughout the county displacing regular texts.

### Geography

Geography inventories revealed about one-third in each of the classifications, actually, thirty-five per cent good, thirty-nine per cent poor and twenty-six per cent very poor (Table 10). Geography textbooks were deficient for the lower grades and few were provided for studies beyond that provided in the regular series.

Table 10

### Geography Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total Geography Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	16	6	10	0	38	62	0
3	2	21	21	0	0	100	0	0
5	2	19	13	6	0	68	32	0
6	2	34	16	18	0	47	53	0
9	4	49	8	33	8	16	68	16
10	4	56	12	22	22	22	39	39
11	5	29	9	9	11	31	31	38
21	2	16	11	3	2	69	19	12
22	3	75	0	45	30	0	60	40
24	3	28	13	13	2	46	46	8
26	2	26	4	16	6	15	62	23
27	1	13	0	13	0	0	100	0
28	4	56	14	10	32	25	18	57
31	3	30	15	15	0	50	50	0
36	3	56	9	23	24	16	41	43
38	4	42	16	16	10	38	38	24
39	2	17	6	6	5	35	35	30

Table 10 (Continued)

Dis- trict Number	Number of Schools	Total Geography Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
40	4	41	22	15	4	54	36	10
44	3	48	10	25	13	21	52	27
46	3	27	5	6	16	19	22	59
47	3	40	34	6	0	85	15	0
48	4	35	28	4	3	80	11	9
51	1	31	18	13	0	58	42	0
52	3	40	8	14	18	20	35	45
53	4	43	34	9	0	79	21	0
54	4	38	19	6	13	50	16	34
57	4	38	22	16	0	58	42	0
58	2	30	13	6	11	43	20	37
59	1	25	0	0	25	0	0	100
60	3	61	8	48	5	13	79	8
62	2	13	3	10	0	23	77	0
63	3	33	8	10	15	24	30	46
64(C)	1	49	7	25	17	14	51	35
65	3	42	18	24	0	43	57	0
66	2	56	14	35	7	25	62	13
67	2	27	23	0	4	85	0	15
68	2	31	10	11	10	32	36	32
69	3	45	7	7	31	15	15	70
70	3	45	16	17	12	35	38	27
71	1	21	8	13	0	38	62	0
73(C)	1	8	4	4	0	50	50	0
74	3	42	29	0	13	19	0	31
75	4	57	22	31	4	39	54	7
76(C)	1	73	10	15	48	14	20	66
77	3	34	10	24	0	29	71	0
78	2	21	9	0	12	43	0	57
80	2	27	15	8	4	55	30	15
81	3	46	10	22	14	22	48	30
82	1	4	0	4	0	0	100	0
83	2	34	12	7	15	35	21	44
84	2	23	0	13	10	0	57	43
85	1	14	11	3	0	79	21	0
88	1	12	12	0	0	100	0	0
<b>Totals</b>		<b>1837</b>	<b>652</b>	<b>709</b>	<b>476</b>			
					<b>Average</b>	<b>35</b>	<b>39</b>	<b>26</b>

Districts Reported 53  
Rural Schools Reported 134  
Rural Consolidated Schools 3



Geography texts are either two-cycle or four-cycle, the latter developed by publishers upon the recommendation of the revision committee of N.E.A. The North Dakota Course of Study for 1935 has outlines based upon the older two-cycle publication. Revisions, on the four-cycle recommendations, had been made for the course of study, but money had not been appropriated for publication. Teachers experienced difficulty in using the old course of study and the new geography series. There was some tendency on the part of the teachers to continue using the old series until a course of study was available for use with the new series.

The thirty-nine per cent of "poor" geographies was four per cent larger than the "good," and thirteen per cent larger than the "very poor."

#### History

Nearly one-half of the history textbooks were reported as "poor" (Table 11). The detailed count revealed thirty-seven per cent good, forty-seven per cent poor and sixteen per cent very poor.

Table 11

#### History Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total History Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	30	7	21	2	23	70	7
3	2	26	17	9	0	65	35	0
5	2	28	5	18	5	18	64	18
6	2	26	13	13	0	50	50	0
9	4	74	20	47	7	27	64	9
10	4	66	22	33	11	33	50	17

Table 11 (Continued)

Dis- trict Number	Number of Schools	Total History Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
11	5	47	22	19	6	47	40	13
21	2	26	15	11	0	58	42	0
22	3	56	16	29	11	29	52	19
24	3	28	10	12	6	36	43	21
26	2	43	17	19	7	40	44	16
27	1	33	6	0	27	18	0	82
28	4	48	20	24	4	42	50	8
31	3	34	23	11	0	68	32	0
36	3	58	24	16	18	41	28	31
38	3	56	17	38	1	30	68	2
39	2	19	10	6	3	53	31	16
40	4	49	17	13	19	35	26	39
44	3	55	32	23	0	58	42	0
46	3	40	12	12	16	30	30	40
47	3	40	21	12	7	52	30	18
48	4	32	14	14	4	44	44	22
51	1	13	13	0	0	100	0	0
52	3	34	4	30	0	12	88	0
53	4	71	41	30	0	58	42	0
54	4	50	12	28	10	24	56	20
57	4	83	25	58	0	30	70	0
58	2	30	15	10	5	50	33	17
59	1	27	0	0	27	0	0	100
60	3	71	11	60	0	15	85	0
62	2	18	18	0	0	100	0	0
63	3	59	26	30	3	44	51	5
64	1	49	16	22	11	33	45	22
65	3	45	19	13	13	42	29	29
66	2	16	6	4	6	38	25	37
67	2	32	22	4	6	69	12	19
68	2	50	6	34	10	12	68	20
69	3	42	13	13	16	31	31	38
70	3	52	17	31	4	32	61	7
71	1	14	11	3	0	79	21	0
73(0)	1	34	17	17	0	50	50	0
74	4	73	16	45	12	22	62	16
75	4	100	18	65	17	18	65	17
76(0)	1	55	10	23	22	18	42	40
77	3	43	19	20	4	44	47	9
78	2	26	16	10	0	62	38	0
80	2	34	12	13	9	35	38	27
81	3	43	14	19	10	33	44	23
82	1	3	2	1	0	67	33	0

Table 11 (Continued)

Dis- trict Number	Number of Schools	Total History Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
83	2	42	15	25	2	36	59	5
84	2	23	18	0	5	78	0	22
85	1	16	8	2	6	50	12	38
88	1	12	12	0	0	100	0	0
Totals		2174	812	1010	352			
Average						37	47	16

Districts Reported 53  
 Rural Schools Reported 134  
 Rural Consolidated Schools 3

United States history can be taught efficiently from older textbooks, provided teachers use supplementary material to throw light on the important events of recent years. Old World background can be taught from older textbooks, for no new material has been added in this course.

Inventories of history textbooks showed them to be forty-seven per cent "poor," a ten per cent larger proportion than "good" books, and thirty-one per cent larger proportion than "very poor" books.

#### Agriculture and Nature Study Poorest

Over fifty per cent of the textbooks in agriculture and nature study were reported poor and less than one-fourth of the textbooks were considered good (Table 12). More texts were considered poor in agriculture and nature study than in any other subject. The inventory indicated twenty-two per cent good, fifty-seven per cent poor and twenty-one per cent very poor.

Table 12

## Agriculture and Nature Study Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total Agri- culture and Nature Study Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	16	7	8	1	44	50	6
3	2	14	0	8	6	0	57	43
5	2	22	11	11	0	50	50	0
6	2	22	6	12	4	27	55	18
9	4	44	0	31	13	0	70	30
10	4	31	2	17	12	6	55	39
11	5	21	7	9	5	33	43	24
21	2	10	6	4	0	60	40	0
22	3	20	0	17	3	0	85	15
24	3	19	4	11	4	21	58	21
26	2	19	0	14	5	0	74	26
27	1	11	6	5	0	55	45	0
28	4	36	11	5	20	31	14	55
31	3	18	9	9	0	50	50	0
36	3	30	1	28	1	3	94	3
38	4	23	0	23	0	0	100	0
39	2	12	4	8	0	33	67	0
40	4	42	2	38	2	5	90	5
44	3	25	14	11	0	56	44	0
46	3	19	6	3	10	31	16	53
47	3	30	5	19	6	17	63	20
48	4	22	6	9	7	27	41	32
51	1	15	0	15	0	0	100	0
52	3	15	9	4	2	60	27	13
53	4	35	12	23	0	34	66	0
54	4	23	17	6	0	74	26	0
57	4	27	1	17	9	4	63	33
58	2	15	0	12	3	0	80	20
59	1	14	0	0	14	0	0	100
60	3	22	0	22	0	0	100	0
62	2	16	4	12	0	25	75	0
63	3	23	1	17	5	4	74	22
64(c)	1	22	0	5	17	0	23	77
65	3	32	6	13	13	20	40	40
66	2	15	0	15	0	0	100	0
67	2	11	11	0	0	100	0	0
68	2	30	0	21	9	0	70	30
69	3	20	1	15	4	5	75	20
70	3	22	0	15	7	0	68	32

Table 12 (Continued)

District Number	Number of Schools	Total Agriculture and Nature Study Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	
71	1	10	4	6	0	40	60	0	
73(0)	1	14	14	0	0	100	0	0	
74	4	18	9	7	2	50	39	11	
75	4	35	10	16	9	29	45	26	
76(0)	1	17	0	0	17	0	0	100	
77	3	30	6	20	4	20	67	13	
78	2	7	4	0	3	67	0	43	
80	2	15	4	7	4	27	47	26	
81	3	37	18	15	4	49	40	11	
82	1	4	0	4	0	0	100	0	
83	2	21	0	21	0	0	100	0	
84	2	11	0	11	0	0	100	0	
85	1	11	4	5	2	36	46	18	
88	1	5	0	5	0	0	100	0	
Totals		1098	242	629	227				
						Average	22	57	21

Districts Reported 53  
 Rural Schools Reported 134  
 Rural Consolidated Schools 3

North Dakota is an agricultural state. From agriculture comes ninety-two per cent of the state's income. It might be expected that the study of agriculture would receive first consideration from rural school boards. However, in agriculture, the smallest per cent of textbooks, twenty-two, were found classified as "good." This situation may be attributed to the fact that publishers had not produced new and up-to-date texts in this subject, as had been done in other fields.

#### Physiology and Health Out of Date

The proportion of poor textbooks in physiology and health nearly equaled the proportion of good and very poor (Table 13). The inventories revealed thirty-four per cent good, forty-six per cent poor

and one-fifth very poor.

Table 13

## Physiology and Health Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total Physiology and Health Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	29	6	17	6	21	58	21
3	2	22	7	15	0	32	68	0
5	2	21	6	15	0	29	71	0
6	2	35	11	4	20	31	12	57
9	4	51	21	20	10	41	39	20
10	4	60	13	17	30	22	28	50
11	5	45	21	20	4	47	44	9
21	2	26	18	8	0	69	31	0
22	3	59	12	29	18	20	50	30
24	3	30	15	14	1	50	47	3
26	2	38	13	25	0	34	66	0
27	1	17	4	6	7	24	35	41
28	4	67	19	12	36	28	18	54
31	3	38	15	23	0	39	61	0
36	3	57	12	32	13	21	56	23
38	4	69	9	60	0	87	13	0
39	2	22	0	22	0	0	100	0
40	4	62	10	34	18	16	55	29
44	3	41	11	25	5	27	61	12
46	3	64	29	15	20	45	24	31
47	3	51	12	23	16	24	45	31
48	4	50	9	31	10	18	62	20
51	1	23	12	11	0	52	48	0
52	3	45	9	20	16	20	44	36
53	4	67	19	36	12	28	54	18
54	4	43	6	25	12	14	58	28
57	4	61	16	37	8	26	61	13
58	2	59	8	51	0	14	86	0
59	1	10	10	0	0	100	0	0
60	3	34	20	4	10	59	12	29
62	2	12	10	2	0	83	17	0
63	3	56	18	23	15	32	41	27
64(c)	1	50	17	21	12	34	42	24
65	3	67	15	19	33	23	26	49
66	2	29	16	13	0	45	55	0
67	2	34	22	5	7	65	15	20
68	2	50	8	34	8	16	68	16
69	3	29	13	8	8	45	28	27
70	3	54	34	20	0	63	37	0

Table 13 (Continued)

Dis- trict Number	Number of Schools	Total Physiology and Health Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	
71	1	24	18	6	0	75	25	0	
73(G)	1	28	28	0	0	100	0	0	
74	4	77	28	44	5	36	57	7	
75	4	83	29	40	14	35	48	17	
76(G)	1	25	25	0	0	100	0	0	
77	3	59	9	50	0	15	85	0	
78	2	33	9	2	22	27	6	67	
80	2	17	10	7	0	59	41	0	
81	3	63	19	35	9	30	56	14	
82	1	3	3	0	0	100	0	0	
83	2	36	11	20	5	31	55	14	
84	2	29	5	10	14	17	35	48	
85	1	24	15	5	4	62	21	17	
88	1	0	0	0	0	0	0	0	
Totals		2178	735	1015	428				
						Average	34	46	20

Districts Reported 53  
 Rural Schools Reported 134  
 Rural Consolidated Schools 3

Much new material has been made available in recent years dealing with physiology and health, from the viewpoint of preservation of health rather than from the viewpoint of anatomy. That the children in McLean county have been denied this new viewpoint is evident from the large percentage, forty-six, of "poor" books, as compared with the thirty-four per cent of "good" texts.

#### Civics Includes Citizenship

The proportion of good books in civics nearly equaled those reported poor. A small proportion were reported very poor (Table 14). Thirty-four districts had no very poor textbooks in this subject, indicating that thirty-six per cent of the districts had not discarded old

texts in this important field.

Table 14

Civics Textbooks in McLean County Rural Schools

1935

Dis- trict Number	Number of Schools	Total Civics Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
2	2	25	10	15	0	40	60	0
3	2	14	7	7	0	50	50	0
5	2	24	13	11	0	54	46	0
6	2	7	2	5	0	29	71	0
9	4	46	16	27	3	35	59	6
10	4	36	21	9	6	58	25	17
11	5	10	5	5	0	50	50	0
21	2	7	7	0	0	100	0	0
22	3	39	11	23	5	28	59	13
24	3	27	21	0	6	78	0	22
26	2	16	10	6	0	62	38	0
27	1	19	1	7	11	5	37	58
28	4	37	28	6	3	76	16	8
31	3	27	7	20	0	26	74	0
36	3	29	13	9	7	45	31	24
38	4	45	15	30	0	33	67	0
39	2	15	4	11	0	27	73	0
40	4	49	10	19	20	20	39	41
44	3	20	3	9	8	15	45	40
46	3	30	19	4	7	63	13	24
47	3	35	22	13	0	63	37	0
48	4	24	5	16	3	21	67	12
51	1	12	0	12	0	0	100	0
52	3	17	11	3	3	66	17	17
53	4	28	10	18	0	36	64	0
54	4	6	3	3	0	50	50	0
57	4	35	8	27	0	23	77	0
58	2	10	4	6	0	40	60	0
59	1	14	14	0	0	100	0	0
60	3	44	12	32	0	27	73	0
62	2	6	0	6	0	0	100	0
63	3	31	11	20	0	35	65	0
64(C)	1	41	3	31	7	7	76	17
65	3	45	19	21	5	42	47	11
66	2	25	15	10	0	60	40	0
67	2	14	12	2	0	86	14	0
68	2	36	4	32	0	11	89	0
69	3	23	8	7	8	35	30	35



Table 14 (Continued)

Dis- trict Number	Number of Schools	Total Civics Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
70	3	18	18	0	0	100	0	0
71	1	0	0	0	0	0	0	0
73(G)	1	0	0	0	0	0	0	0
74	4	16	10	3	3	62	19	19
75	4	30	21	6	3	70	20	10
76(G)	1	65	46	3	16	71	5	24
77	3	22	14	8	0	64	36	0
78	2	0	0	0	0	0	0	0
80	2	12	0	12	0	0	100	0
81	3	43	16	24	3	37	56	7
82	1	0	0	0	0	0	0	0
83	2	7	3	4	0	43	57	0
84	2	9	4	5	0	44	56	0
85	1	0	0	0	0	0	0	0
88	1	0	0	0	0	0	0	0
Totals		1190	516	547	127	Average 43 46 11		

Districts Reported 53  
 Rural Schools Reported 134  
 Rural Consolidated Schools 3

Several publications in the field of civics are available to North Dakota schools. The interest of school boards in civics is evidenced by the comparatively large percentage of good textbooks in this subject. The forty-three per cent "good" are exceeded by only three per cent of those graded "poor," and exceeds, by thirty-two per cent, those "very poor."

A comparison is provided in Table 15 for all the textbooks, which indicates the county averages of thirty-four per cent good, forty-six per cent poor and twenty per cent very poor.

Table 15

## Summary of Textbook Inventories, Rural Schools, McLean County

1935

Books	Number of Books	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
Reading	8620	2574	4348	1698	30	50	20
Language and Literature	2803	697	1590	516	25	57	18
Arithmetic	2430	1134	696	600	47	29	24
Spelling	1273	364	694	215	29	54	17
Geography	1837	652	709	476	35	39	26
History	2174	812	1010	352	37	47	16
Agriculture and Nature Study	1098	242	629	227	22	57	21
Physiology	2178	735	1015	428	34	46	20
Civics	1190	516	547	127	43	46	11
Total	14983	5152	6890	2941	34	46	20

No inventories for the village schools of McLean County were taken for the year of 1935. It is very probable that no great contrast could be shown between an inventory from one year to the next for this group, as most of the purchasing is done under the advice of the local superintendent whose program usually includes the regular replacement of worn-out or obsolete textbooks. The 1938 inventories for the village schools can be considered as representing a normal situation, likewise the 1935 inventories for the rural schools may be considered as representing a normal situation for that group.

A sharp contrast between the textbooks of the village and rural

schools is shown in a comparison of Table 6 showing the number of reading textbooks per grade for the rural schools and Table 16 showing the reading textbooks for the village schools. For the rural schools there were 3.31 sets of readers per grade per school; for the village schools there were 6.10 per grade per school. The rural schools had thirty per cent good; the village schools had sixty-five per cent good. Although no tables have been prepared it is more than likely this same relative condition would exist for other textbooks as well.

Table 16  
 Reading Textbooks in McLean County Village Schools  
 1938

Dis- trict Number	Number of Schools	Total Reading Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor	Number of Sets per Grade per School	
4	1	907	644	199	64	71	22	7	6.00	
7	1	217	163	30	24	75	14	11	3.00	
8	1	340	259	67	14	76	20	4	6.83	
50	1	836	446	390	0	53	47	0	8.17	
51	1	840	491	264	85	59	31	10	8.67	
62	1	251	109	41	101	44	16	40	4.17	
67	1	353	346	7	0	98	2	0	5.83	
Totals		3744	2458	998	288					
						Average	65	27	8	6.10
Districts Reported 7										
Schools Reported 7										

Under a stimulated buying program, such as that outlined in Chapter 4, the rural schools showed a marked improvement in the condition of the textbooks - in fact, showed on their 1938 inventories eight per cent more textbooks classified as "good" than did the village schools (Table 17).

Table 17

Comparison of Total Number of Books in Rural and Village Schools  
McLean County, 1938

	Total Number Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
Rural	25,265	18,697	4,800	1,768	74	19	7
Town	7,909	5,213	1,976	720	66	25	9

Summary of Chapter 3

Inventories of textbooks for the rural schools of McLean county for the year 1935 revealed thirty-four per cent good, forty-six per cent poor and twenty per cent very poor. The village schools of McLean county for 1938 revealed sixty-six per cent good, twenty-five per cent poor and nine per cent very poor. For the year 1938 the rural schools of McLean county indicated on the inventories seventy four per cent good, nineteen per cent poor and seven per cent very poor.

Rural school inventories for 1935 showed the following percentages of "good" books: Nature study and agriculture, twenty-two per cent; language and literature, twenty-five per cent; spelling, twenty-nine per cent; reading, thirty per cent; physiology, thirty-four per cent; geography, thirty-five per cent; history, thirty-seven per cent; civics, forty-three per cent; and arithmetic, forty-seven per cent.

Rural school inventories for 1935 showed the following percentages of "poor" books: Arithmetic, twenty-nine per cent; geography, thirty-nine per cent; physiology, forty-six per cent; civics, forty-six per cent; history, forty-seven per cent; reading, fifty per cent; spelling, fifty-four per cent; language and literature, fifty-seven

per cent; agriculture and nature study, fifty-seven per cent.

Rural school inventories for 1935 indicated the proportion of "very poor" books: Civics, eleven per cent; history, sixteen per cent; spelling, seventeen per cent; language and literature, eighteen per cent; reading, twenty per cent; physiology, twenty per cent; agriculture and nature study, twenty-one per cent; arithmetic, twenty-four per cent; and geography, twenty-six per cent.

## CHAPTER 4

## COUNTY PURCHASE PLAN

In order to comply with the North Dakota law (page 10), equipment purchases by the school board must have the approval of the county superintendent of schools. When purchases are made without such approval, inferior and sometimes obsolete equipment is often obtained, for school officers do not always have the time or talent required to keep abreast of the constant changes being made. Without some organization of detail the county superintendent would find it impossible to approve all purchases. The time of that office is usually crowded, and details must be handled in a systematic way or no time will be left for broader duties of leadership.

School board members from the rural districts furnished the original impetus to the formation of the county purchase plan for McLean County in requesting help in replacing obsolete textbooks. The county purchase plan is suggested as a workable plan to carry on a systematic purchase of textbooks and equipment in a widely scattered school system, such as a county, and should work equally as well within a more limited area. It provides for economy of time for the county superintendent, provides for approval of purchases, guides school boards by furnishing an approved list, and sets a definite time for purchasing with economy and efficiency.

The plan also provides help for the inexperienced teacher, who by necessity is called upon to make selection of materials necessary for conducting a rural school, yet properly places the matter of quantity in the hands of the person who must use the materials and is best

qualified to know what is needed.

In the school year of 1934-35 inventory forms (Figure 1) were mailed to each teacher in the rural schools for the first time.

### Inventory of School Texts

Fill in this form and send one to the county superintendent with your next monthly report and one to the clerk of the school board in your school district.

List below the names and titles of texts by grades. Give the name of the text, the last copyright date and the number of copies of each. If you exchange books with other schools in your district, list only books now in your school. Give the condition of the books by the following letters:

G (good) for new books or books in very good condition.

P (poor) books marked up, out of date, all prior to 1925 in this class.

VP (very poor) books with pages missing, pages torn and generally mutilated.

Example: "6 Elson 1935 G."

School No. \_\_\_\_\_ District No. \_\_\_\_\_  
Teacher \_\_\_\_\_

Readers:

1st Grade \_\_\_\_\_

2nd Grade \_\_\_\_\_

3rd Grade \_\_\_\_\_

4th Grade \_\_\_\_\_

5th Grade \_\_\_\_\_

6th Grade \_\_\_\_\_

Language and Literature:

Lower Grade \_\_\_\_\_

Middle Grades \_\_\_\_\_

Upper Grades \_\_\_\_\_

Arithmetics:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Spellers: \_\_\_\_\_

Geographies:

\_\_\_\_\_  
\_\_\_\_\_

Histories:

---



---



---

Agriculture and Nature Study:

---



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(Over for Physiology or Health and other texts not listed)

(The reverse side is left blank)

Figure 1. Inventory of Textbook Form (8 $\frac{1}{2}$  by 16)

The inventories of texts were rather slow in reaching the county superintendent's office. In fact, nearly the entire school term was gone before all the reports were returned.

This inventory, when finally checked, revealed the result of a laissez-faire attitude on the part of school officials. The lists of books showed the hodge-podge collection which had been purchased without plan and had accumulated through the years. True, a so-called recommended list had been published at one time by a former county superintendent, but there was no definite time set for revising or reprinting this recommended list or for sending the same list to the school boards or teachers.

In former years no provision was made for teacher participation in the selection of the textbooks to appear upon the county superintendent's list. Publishing houses offered to publish such lists free, in order to have their own books placed in a favorable position. Experienced teachers who knew textbooks and their use could not pass on their knowledge to beginners, for no avenue was provided to them.



The inventories of 1933-34 revealed the lack of uniformity in the selection of textbooks (Table 18).

Table 18

Lack of Uniformity in the Textbooks Used in McLean  
County Rural Schools Prior to 1935

Textbook	Number of Different Authors and Publishers
Geography	17
Arithmetic	14
Spellers	17
History	16
Agriculture	11
Language	19
Readers	32

It was likewise found that large numbers of the texts in use were very old, with a considerable number of books in reading, geography, history and hygiene copyrighted prior to the year 1910. The number of books on hand were not of sufficient quantity to provide each child with a text. In many cases different kinds of texts were used in the same class; and, very commonly, children shared readers and other texts.

At first, no special use was intended for the inventories except as a matter of information for the county superintendent. However, when the duplicate copies reached the school officers and they realized the condition of the textbooks in their schools, many came to the office of the county superintendent to ask what should be done. As one officer said, "We got the list of junk in our schools. What shall we do with it?" He was advised to keep the list but to get rid of the junk.

The next question that naturally arose was how to get rid of the old textbooks and substitute new ones.

In March of 1935 a series of four school officers' meetings were held in convenient places in the county, at which, among other things, the county superintendent outlined a county purchase plan for the purchase of textbooks and equipment. A vote on giving the tentative plan a trial was called for at each of the meetings, with almost unanimous approval being voiced by the school officers in attendance. The plans went forward.

#### Textbooks

In order to revise the recommended list of textbooks, mimeographed forms were prepared in 1934 by the county superintendent and mailed to each teacher in, both, rural and village schools, asking that each teacher submit recommendations for texts to appear on the proposed recommended list. These returns were tabulated in the office of the county superintendent; and, from this information, a new recommended list was compiled.

In due time order forms, instructions and the recommended list were prepared in the county superintendent's office and mailed to all teachers in the county. All forms were limited to permit the use of legal size paper ( $8\frac{1}{2} \times 16$ ). The letter of instructions was made in such a way that the same instructions could be sent to teachers, school officers or to publishing house for approval of the plan. The letter of instruction is shown herewith (Figure 2).

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## COUNTY PURCHASE PLAN FOR MCLEAN COUNTY

Several definite ends hope to be accomplished through the plan of County purchasing. These are:

1. Save 25% on cost by purchasing direct from publishers.
2. Save 15% to 20% additional by exchanging of old texts or saving through quantity buying.
3. Save 4 to 6 weeks of school time in September and October "waiting" for books.
4. Save many student failures due to greater teaching efficiency.
5. Save through elimination of hurried and unplanned buying.
6. Increase textbook value by discarding out-of-date copyrights.  
Aim: "A modern education for modern youth."
7. Create new student interest through use of modern texts.

### I. The Plan

Requisitions will be sent to each teacher before school closes. Teacher makes out order to take care of needs of following year. Orders should be based on a conservative estimate of enrollment because return privilege is not ordinarily granted by publishers except on introductory orders. Then, too, returns always involve extra transportation costs. Do not order "fill in" texts for old copyright sets prior to the year 1930. These old texts should be replaced by new up-to-date material and the old set "traded in" on the new set, or discarded. Texts with covers, no matter how badly torn, can be traded in. Teachers should confer so as to order sets that may be exchanged between schools of the district during the year.

### How to Handle "Trade In" Sets

Tie the old sets together with strong cord or rope. Do not wrap with paper. On the top volume paste a label with the following information:

Name of text . . . . .  
 Number of books . . . . .  
 Name of publishers . . . . .  
 Traded in on (name of new text) . . . . .  
 Name of publisher . . . . .  
     (Same subject of like grade and kind, but of different  
     authorship, and at present in use in the school)  
 School district name . . . . . No. . . . . Sch.No. . . . .  
 Name of clerk . . . . . Address . . . . .  
 Teacher's name . . . . .

These old texts will be left with the president or clerk (unless otherwise ordered by the board). These officers will bring the texts to the county superintendent at Washburn when

- attending the school officers' meeting in June, or send them in at any time before that date. The county superintendent will ship these old texts by freight to the publishers.
- II. Teachers will send order for new texts to the county superintendent who will "approve" the order and send it to the school board.
  - III. Orders can then be OK'd by the president and clerk.
  - IV. Clerk will send order to county superintendent of schools at Washburn on or before June 1.
  - V. County superintendent will compile orders from all districts and send direct to publishers.
  - VI. Publishers will fill orders, wrapping the orders separately for each district, labeled with the following information:
    - Name of district . . . . .
    - Name of clerk . . . . .
    - Address of clerk . . . . .
    - Name of text . . . . .
    - Number of books . . . . .
 The texts will be sent by prepaid freight to Albert Peterson, County Superintendent, Washburn, North Dakota, not later than August 1.
  - VII. School officers will be notified when books arrive. Anyone authorized by the board, calling at the county superintendent's office, will, during August, take the supply to the clerk, who will turn over the texts to the teacher on the opening day of school.
  - VIII. Publishers will bill the individual districts for texts furnished, charging proportionate freight, and school boards agree to make settlement at their first regular meeting following receipt of goods.

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Figure 2. Outline of a County Purchase Plan for  
McLean County (8½ by 16)

The order form and recommended list were combined on the sheet, thus eliminating errors in listing and simplifying the work of making out the orders. This order form is shown herewith (Figure 3) which should perhaps be called a "recommended-list-requisition-order form."



	1	2	3	4	5	6	7	8
ESSENTIALS OF EVERYDAY ENGLISH (Workbook-textbook) - Laidlaw Brothers	#	#						
STEPS TO GOOD ENGLISH by Ables & Lowler	#	#						
Text & workbook - Iroquois Pub. Co.	#	#	#	#	#	#		
SHARPS ENGLISH EXERCISES - Webster Pub. Co.	#							
WESTERN UNIT WORKBOOK (Reading and language)								
Hammond Stephens Co.	#	#						
ESSENTIALS OF GEOGRAPHY - American Book Co.	#	#	#					
Workbooks for above	#	#	#					
GEOGRAPHY: AROUND THE WORLD WITH THE CHILDREN	#	#		#	#	#	#	#
American Book Co. - Workbooks for above	#	#		#	#	#	#	#
GEOGRAPHY: NEIGHBORHOOD STORIES - Atwood Thomas	#	#		#	#	#	#	#
Ginn & Co. - Workbooks for above	#	#		#	#	#	#	#
ATWOOD THOMAS GEOGRAPHY - 4-book series	#	#	#					#
Ginn & Co. - Workbooks for above	#	#	#					#
THE WORLD AT WORK - Ginn (Supplementary)	#	#	#	#	#	#		#
THE GROWTH OF NATIONS - Ginn (Supplementary)	#	#	#	#	#	#		#
AGRICULTURE: PRACTICAL FARMING - Power-Kivlin	#	#	#	#	#	#		#
E. M. Hale & Co. - Workbooks for above	#	#	#	#	#	#		#
PHYSIOLOGY & HEALTH - B. C. & Maroney								
Lyons & Carnahan	#	#						
PHYSIOLOGY WORKBOOK - Webster Pub. Co.								
BURNHAMS "HERO TALES FROM HISTORY" - John								
C. Winston Co.	#	#	#			#	#	#
ELEMENTARY WORLD HISTORY - Beard & Bagley								
Macmillan Co.	#	#	#	#	#		#	#
THE BACKGROUND OF MODERN NATIONS - Laidlaw	#	#	#	#	#		#	#
OUR BEGINNINGS IN EUROPE AND AMERICA								
Smith-Burnham - J. C. Winston & Co.	#	#	#	#	#		#	#
A HISTORY OF THE AMERICAN PEOPLE - Beard								
& Bagley - Macmillan Co.	#	#	#	#	#			
HISTORY TEXTBOOK & WORKBOOK - OLD WORLD								
HISTORY - Iroquois Pub. Co. - Bk. I & II	#	#	#	#	#		#	#
(Reverse)								
	1	2	3	4	5	6	7	8
HISTORY WORKBOOK - American History - West								
Wallace - Allyn & Bacon	#	#	#	#	#	#		
HISTORY WORKBOOK - A STUDENT'S GUIDE IN								
AMERICAN HISTORY - Iroquois Pub. Co.	#	#	#	#	#	#		
PATHWAYS IN SCIENCE - Ginn & Co.							#	#
CIVICS: BRIEF HISTORY OF NORTH DAKOTA - Fish								
& Black - American Book Co.	#	#	#	#	#	#		
CIVICS: STORY OF THE FLICKERTAIL STATE -								
Wemett - Northern School Supply Co.	#	#	#	#	#	#		
CIVICS WORKBOOK - DIRECTED STUDY WORKBOOK IN								
OUR STATE - Ellis Welte - American Bk. Co.	#	#	#	#	#	#		
CHARACTER EDUCATION: CONDUCT PROBLEMS (1 of								
each per school, paper bound) Macmillan Co.	#	#	#	#				

## EQUIPMENT

- \_\_\_\_\_ Map of North Dakota (on single roller case)
- \_\_\_\_\_ 7 Physical-political maps (single roller)
- \_\_\_\_\_ 8 map combinations (7 physical-political and map of North Dakota single roller)
- \_\_\_\_\_ 12-inch suspension globe
- \_\_\_\_\_ Webster's International Dictionary (452,000 words)
- \_\_\_\_\_ Shelf and holder for large dictionary
- \_\_\_\_\_ Set of Compton's Encyclopedia
- \_\_\_\_\_ Set of World Book Encyclopedia
- \_\_\_\_\_ Latta's Book for Teachers (one per teacher)
- \_\_\_\_\_ World Almanac (one copy per school, published yearly, sent in January)
- \_\_\_\_\_ World Famous Pictures (picture study book, 360 pages, 72 pictures, 1 copy per school, Lyons & Carnahan)

Winston's Simplified Dictionary - J. C. Winston Co.

- \_\_\_\_\_ Primary (28,000 words)
- \_\_\_\_\_ Intermediate (40,000 words)
- \_\_\_\_\_ Advanced (100,000 words)

Publications: DeLong Subscription Agency, Inc., Lafayette, Indiana.

No. subscriptions wanted:  
(one per grade)

MY WEEKLY READER:

- \_\_\_\_\_ Grade 1
- \_\_\_\_\_ Grade 2
- \_\_\_\_\_ Grade 3
- \_\_\_\_\_ Grade 4
- \_\_\_\_\_ Grades 5-6

\_\_\_\_\_ CURRENT EVENTS

No. subscriptions wanted:  
(one per school)

- \_\_\_\_\_ SCHOOL LIFE
- \_\_\_\_\_ NEWS WEEK
- \_\_\_\_\_ PATHFINDER
- \_\_\_\_\_ GRADE TEACHER
- \_\_\_\_\_ INSTRUCTOR
- \_\_\_\_\_ POPULAR SCIENCE
- \_\_\_\_\_ POPULAR MECHANICS
- \_\_\_\_\_ LITERARY DIGEST

## CLASSICS - Graded Selections

(Recommend one for each pupil) (For class work)

(Odd years)

- \_\_\_\_\_ Legend of Sleepy Hollow, Irving
- \_\_\_\_\_ The Great Stone Face, Hawthorne
- \_\_\_\_\_ Snowbound, Whittier
- \_\_\_\_\_ Grandfather's Chair, Hawthorne
- \_\_\_\_\_ Warren's Address at Bunker Hill, Pierpont

(Even years)

- \_\_\_\_\_ Rip Van Winkle, Irving
- \_\_\_\_\_ Christmas Carol, Dickens
- \_\_\_\_\_ Man Without A Country, Hale
- \_\_\_\_\_ Evangeline, Longfellow
- \_\_\_\_\_ Gettysburg Address, Lincoln

(Recommend at least one for each three pupils) (To be read independently)

_____	Robinson Crusoe, Defoe
_____	Tales from Shakespeare, Lamb
_____	Boys' Life of Edison, Meadowcraft
_____	When They Were Girls, Moore
_____	Boys' Life of Lincoln, Nicolay
_____	Story of the Other Wise Man, Van Dyke
_____	Stories of the Great West, Roosevelt
_____	Autobiography of Franklin
_____	Perfect Tribute, Andrews
_____	Boy Life on the Prairies, Garland
_____	Little Women, Alcott
_____	Treasure Island, Stevenson
_____	Daniel Boone, White

Figure 3. Order Form and Recommended List (8½ by 16)

The needs of the school were listed by the teacher on the Recommended List and Order Form (Figure 3), and the form was then sent to the county superintendent, who, according to law,<sup>1</sup> should approve the purchase of all necessary and suitable furniture, maps, charts, globes, blackboards, and other school apparatus. (See statement of law, page 10.) After being approved by the county superintendent the requisition or order forms were sent to the school board, who are charged by law with the responsibility of furnishing to each school all necessary and suitable furniture, maps, charts, globes, etc., with the approval of the county superintendent. If the requisition met with the wishes of the school board, the president and clerk signed the requisition under the statement: "We hereby agree to make settlement for the following goods at the first regular meeting following receipt of goods." The requisition now became a signed order and was sent to the county superintendent of schools.

<sup>1</sup>State of North Dakota General School Laws, 1935. P. 51



Upon receipt of the signed orders the county superintendent placed orders with the various publishing or supply houses for the quantities ordered by the school board of each district. These order forms used by the county superintendent carry definite instructions to the publishers for handling the order (Figure 4).

School Dist. No. \_\_\_\_\_  
Clerk \_\_\_\_\_  
McLean County, North Dakota

Ginn & Company  
Burton B. Moyer  
2301-2311 Prairie Avenue  
Chicago, Illinois

Gentlemen:

Please ship the following texts by PREPAID freight to Albert Peterson, County Superintendent of Schools, Washburn, North Dakota, for the above district and send the bill plus PRORATED freight, with deductions for "trade-in" texts, to the clerk.

Please tie and wrap orders separate for each district, labeled with the following information:

Name of district \_\_\_\_\_ No. \_\_\_\_\_  
Name of clerk \_\_\_\_\_ Address \_\_\_\_\_  
Name of texts \_\_\_\_\_ No. of copies \_\_\_\_\_

All original orders for the following books are on file with the county superintendent, signed by the president and clerk under the statement: "We hereby agree to make settlement for the following order at the first regular meeting following receipt of goods."

Orders are to be shipped to reach Washburn not later than August 1.

Readers

Pennel & Cusak - THE CHILDREN'S OWN READERS

GRADES:

P. PRIMER \_\_\_\_, PRIMER \_\_\_\_, 1 \_\_\_\_, 2 \_\_\_\_, 3 \_\_\_\_, 4 \_\_\_\_, 5 \_\_\_\_, 6 \_\_\_\_

Workbooks

GRADES:

P. PRIMER \_\_\_\_, PRIMER \_\_\_\_, 1 \_\_\_\_, 2 \_\_\_\_, 3 \_\_\_\_, 4 \_\_\_\_, 5 \_\_\_\_, 6 \_\_\_\_

Geographies

ATWOOD THOMAS

(4-book series) Book I \_\_\_\_, Book II \_\_\_\_, Book III \_\_\_\_, Book IV \_\_\_\_

Workbooks

GRADES: 4 \_\_\_\_, 5 \_\_\_\_, 6 \_\_\_\_, 7 \_\_\_\_, 8 \_\_\_\_

Agriculture and Nature Study  
 Craig & Johnson - PATHWAYS IN SCIENCE

GRADES: 1 \_\_, 2 \_\_, 3 \_\_, 4 \_\_, 5 \_\_, 6 \_\_

Very truly yours,

Albert Peterson  
 County Superintendent of Schools  
 Washburn, McLean County, North Dakota

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Figure 4. A Typical Publisher's Order Form (8 $\frac{1}{2}$  by 16)

(Made in triplicate: one for publisher, one for county superintendent, one for clerk.)

All orders for goods were sent by the publishers or supply houses to the county superintendent's office by the transportation method costing the least, which in nearly all cases was by freight, except for small quantities, when express or parcel post was used. Orders were submitted to the publishers during the latter part of June or early July which allowed ample time for the use of freight shipments, which are slower but least expensive. Usually all materials were received by the county superintendent by the first of August. Packages were then sorted by districts, which is a comparatively simple task, since all packages were wrapped separately for each district and labeled with the name of the clerk and the name and number of each district. All texts remained in these original packages until they reached the hands of the teachers in the school, thus insuring excellent condition of the texts, with no damage due to handling. Transportation of the books from the county superintendent's office to the school district was accomplished without expense, for it was possible to send them out with patrons or school officers who usually make frequent visits to the county seat on other business.

### Other Equipment

Pieces of equipment other than textbooks were ordered under the county purchasing plan, such as maps, globes, encyclopedia and dictionaries. These items were limited to standard equipment needed in the schools to qualify as a third class rural school. Items listed were limited further to such articles that can be handled without piece sorting. These items were listed on the reverse side of the textbook order form (Figure 3).

The price of the articles placed on the list was not reduced, even though the orders were fairly large. Bidding on these items was attempted but did not work out to advantage. However, special concessions were offered by the jobbers, such as, the payment of transportation to the county. Only the best known grades of equipment were secured. Prices usually were set by the manufacturer who did not permit price cuts by the jobbers.

### Library Books

The county purchasing plan was also used to purchase library books. Every effort was made to avoid duplication of library books in the same district, thus permitting exchange of library books among the several schools in order to increase the number of available books, at a minimum expense.

Library book order forms were accompanied by new inventory forms. Duplication of orders was avoided by the following procedure: the teacher in school number one was instructed to fill out an inventory and order form, then to send both to the teacher in school number two. The teacher in school number two then checked the inventory and order form sent from

school one in order to avoid placing orders to duplicate any volumes found on either the order or inventory of school number one. The inventory and order was then made out for school two and sent to school number three, together with the order and inventory from school number one. Here the same checking for duplication was done before an order was made out and sent to school number four. The teacher in school number four (or the last school in the district), sent all the orders and inventories to the county superintendent.

Library inventory form (Figure 5) was provided in duplicate so that one list might be later posted in the library or book case as a permanent inventory for the school and, also, to assist pupils in selecting books to read.

#### Inventory of Library Books in Bulletin #5

In order to determine the available books will you please list below the books to be found in your library which are listed in Bulletin #5 (any date). Do not list books which are not found in Bulletin #5.

Send one copy of this list with the library book order; post the other in the school library.

First, list grade one, then grade two, etc.

Figure 5. Library Book Inventory (8½ by 16)

By grouping orders from the entire county, the jobbers allowed the quantity discounts quoted in their catalogs for quantity purchases, ranging from four per cent on a \$15.00 order to ten per cent on an order of \$500.00 (Figure 6).

## ORDER FORM FOR LIBRARY BOOKS

Make two copies. Fill out and send both to next school in your district (teacher in #1 send to #2, then #2 to #3, etc.). Teacher in school #4 (or last) will send all copies to the county superintendent who will OK them, then return to the president for the signature of the president and clerk. Clerk will then send one copy to the county superintendent as an order, keeping duplicate for checking when the books arrive.

Discounts: (County) Order for \$15.00, 4%; \$25.00, 6%; \$50.00, 6%; \$100.00, 7%; \$250.00, 8%; \$500.00, 10%. (See catalogs)

We hereby agree to make settlement for the following order not later than the regular meeting following receipt of goods.

Sch. Dist. Name \_\_\_\_\_ No. \_\_\_\_\_

Name \_\_\_\_\_ School No. \_\_\_\_\_  
(Teacher)

\_\_\_\_\_ Pres.

OK \_\_\_\_\_ Co. Supt.

\_\_\_\_\_ Clerk

ALL BOOKS ORDERED MUST BE SELECTED FROM BULLETIN #5 for 1937.

The following will show the enrollment by grades - and volumes listed in Bulletin #5 (any year), in the library now:

	Grades	1	2	3	4	5	6	7	8	
Books in Bulletin #5 in school at present										VERY IMPORTANT
Expected enrollment for this order										
Grade I	Title of Book	Author	Publisher							Page of Bulletin #5

Grade IV

(Over for grades 5, 6, 7, 8)

Figure 6. Library Book Order Form (8½ by 16)

### Trade-in Texts

An important part of the county purchasing program was the feature of handling the trade-in of old textbooks. No plan had ever been used for the rural school with the result that old textbooks had accumulated for years. This hodge-podge of obsolete books crowded good books out of the very limited book-case room, or else were stacked in entry ways or in attics, where they formed bad fire hazards or provided nesting places for mice. These, together with the books that were actually in use, could be considered as books in use, for they would be used occasionally whenever the enrollment made it necessary. Their presence in the school created the false impression in the minds of the school officers and patrons that the school had plenty of textbooks, and no new ones were needed; or, if new ones were secured, that such expenditure was a waste of money.

By providing a means of exchange of old textbooks, the matter of purchasing new ones was simplified, from the psychological point of view. Detailed instructions for handling the trade-in textbooks appeared in the instructions (Figure 2). Special sticker labels (Figure 7) were prepared by the county superintendent. A small quantity of these sticker labels was sent to each teacher with instructions that more could be obtained upon request. Such requests were usually made on the space provided on the regular monthly report card or on one cent postal cards, if the request was urgent. The use of letters for such requests was discouraged, as the cost of mailing was more, and post cards were easier to handle in the office.

**PLACE THIS LABEL ON "TRADE-IN" SETS**

**How to handle "trade-in" sets:**  
 Tie each of the old "trade-in" sets together with strong cord or rope.  
 Do not wrap with paper. On the top volume paste this label.  
 "Trade-in" sets must be of the same subject of like grade and kind, but of different authorship, and at present in use in the school.  
 Be sure to fill in the following information:

NAME OF TEXT \_\_\_\_\_ NO. \_\_\_\_\_ GRADE \_\_\_\_\_  
 NAME OF PUBLISHERS \_\_\_\_\_  
 TRADED IN ON (Name of New Text) \_\_\_\_\_  
 NAME OF PUBLISHER \_\_\_\_\_  
 (Same subject of like grade and kind, but of different authorship, and at present in use in the school.)  
 SCHOOL DISTRICT NAME \_\_\_\_\_ NO. \_\_\_\_\_ SCHOOL NO. \_\_\_\_\_  
 NAME OF CLERK \_\_\_\_\_ ADDRESS \_\_\_\_\_  
 TEACHER'S NAME \_\_\_\_\_

These old sets will be left with the President (unless otherwise ordered by the board) who will bring them to the County Superintendent at Washburn. The County Superintendent will ship the old texts by freight to the publishers.

Figure 7. Label for Trade-in Textbooks (5½ by 3½)

#### Current Literature

In connection with the reading program, special mention should be made of the feature of the county purchase order form (Figure 3), providing for orders for current literature. This is important in rounding out the school reading program. Current literature motivates reading and brings current information to the rural community where daily and even weekly papers are not too common.

In order to handle the matter of credit, all publications were ordered from one subscription agency. A typical order form is shown in Figure 8.

Sch. Dist. No. \_\_\_\_\_  
 Clerk \_\_\_\_\_  
 McLean County, North Dakota

DeLong Subscription Agency, Inc.  
 Lafayette, Indiana

Gentlemen:

Please enter subscriptions at once for the following publications and send to \_\_\_\_\_, \_\_\_\_\_ Sch. Dist. # \_\_\_\_\_ School # \_\_\_\_\_, \_\_\_\_\_, North Dakota, for the remainder of the present school term. Send the bill for the above publications to the clerk of the school district.

All original orders for the following publications are on file with the county superintendent of schools, signed by the president and clerk under the statement: "We hereby agree to make settlement for the following order at the first regular meeting following receipt of goods."

#### Publications

No. subscriptions wanted:

MY WEEKLY READER:

\_\_\_\_\_ Grade 1  
 \_\_\_\_\_ Grade 2  
 \_\_\_\_\_ Grade 3  
 \_\_\_\_\_ Grade 4  
 \_\_\_\_\_ Grade 5-6

No. subscriptions wanted:

\_\_\_\_\_ NEWS WEEK  
 \_\_\_\_\_ PATHFINDER  
 \_\_\_\_\_ GRADE TEACHER  
 \_\_\_\_\_ INSTRUCTOR  
 \_\_\_\_\_ POPULAR SCIENCE  
 \_\_\_\_\_ POPULAR MECHANICS  
 \_\_\_\_\_ LITERARY DIGEST  
 \_\_\_\_\_ CURRENT EVENTS

Very truly yours,

Albert Peterson  
 County Superintendent of Schools  
 Washburn, McLean County, North Dakota

Figure 8. Order Form for Current Literature (8 $\frac{1}{2}$  by 16)

#### Advantages

Very material advantages can be listed for the county purchase plan. A few of these are:

1. A unified system of selection from approved lists.
2. Savings:



- a. By taking advantage of offered discounts.
  - b. Savings in transportation costs.
  - c. Saving in time, since books were on hand at the opening of school.
3. Places selection in the hands of teachers and superintendent.
  4. Saving of time for school officers who can sign orders at a regular board meeting.
  5. Elimination of some pupil failures, due to better fact material and more interesting textbooks.

#### Costs

The cost of textbooks was reduced \$2,782.01, or \$927.33 per year, under the county purchase plan when the three years from 1935 to 1938 are compared with the three years of 1927 to 1930; but increased \$18,049.65, or \$6,016.55 per year, over the three years just previous, 1932-1935 (Table 19).

When considering the average for the seven years from 1924-1925 to 1930-1931, as compared with a seven-year period from the years 1931-1932 to 1937-1938, the cost is shown to be less for the last seven years by \$2,857.90, or \$408.27 less per year.

However, the total number of textbooks were increased by 10,282 during the last three years. The number of "good" books increased from thirty-four per cent to seventy-four per cent during the same period. At the same time "poor" books were reduced from forty-six per cent to nineteen per cent and "very poor" books were reduced from twenty per cent to seven per cent.

Table 19  
The Cost of Textbooks in McLean County for Two Seven-  
Year Periods, 1924-1931 and 1931-1938

Year	Amount	Discounts Saved to School Districts	Amounts Saved to School Districts (estimated)
1. 1924-25	\$ 6,822.54	None	
2. 1925-26	2,727.13	None	
3. 1926-27	1,945.17	None	
4. 1927-28	12,840.85	None	
5. 1928-29	11,401.89	None	
6. 1929-30	10,625.47	None	
7. 1930-31	<u>7,658.35</u>	None	
7-year total	\$54,021.40		
7-year ave.	7,717.34		
1. 1931-32	\$ 5,030.65	None	
2. 1932-33	3,244.75	None	
3. 1933-34	4,616.61	None	
4. 1934-35	6,185.29	None	
5. 1935-36	14,380.46	25% by direct purchasing <u>20%</u> on trade-in 45% total	\$11,765.84
6. 1936-37	8,718.34	25% by direct purchasing <u>20%</u> on trade-in 45% total	3,736.43
7. 1937-38	8,987.40	25% by direct purchasing <u>5%</u> on trade-in 30% total	2,468.34
7-year total	\$51,163.50	Total saved (discount)	17,970.61
7-year ave.	7,309.07	Difference saved	<u>2,857.90</u>
		Total	<u>20,828.51</u>

#### Summary of Chapter 4

The county purchase plan provides a means of purchasing textbooks and equipment, in a widely scattered school system, from recommended lists of textbooks selected by teachers and superintendent. It provides for economy of time for teachers, school officers, county superintendent and pupils, as well as effecting savings to school

treasuries by taking advantage of offered discounts. A regular time is provided for ordering new equipment, with provision for disposing of obsolete textbooks, thereby maintaining equipment at its highest educational efficiency. Means are provided for the county superintendent to comply with the law in approving the purchase of texts, maps, charts, globes and other equipment.

It would appear that the county schools had been operating with a shortage of 10,000 textbooks, since this number was added under the county purchase plan. Likewise the number of poor and very poor books was very large, as compared with the number of good books. Within three years under the county purchase plan, the percentage of good books increased from thirty-four per cent to seventy-four per cent, while the poor and very poor reduced in percentage from forty-six to nineteen, and twenty to seven, respectively.

## CHAPTER 5

## RELATION OF EQUIPMENT TO THE TEACHING OF READING AND OTHER SUBJECTS

In order to determine the reading ability of the pupils in the rural schools, tests were given to pupils enrolled in the sixth, seventh and eighth grades. Tests were administered to these three grades only, due mainly, to the limited funds available for this purpose. Since the limited funds made it impossible to test in all subjects, the most fundamental of all branches of learning, reading, was selected as the one subject in which the students were to be tested. It is generally recognized among educators that ability in reading makes it possible for pupils to study other subjects.

In selecting a reading test, it was necessary to secure a type which could be administered to the several grades at the same time, with a minimum of supervision on the part of the teachers who had little or no training, as a group, in the technique of testing. A test meeting these general requirements was secured from the Educational Publishers, Valley City, North Dakota, at a very nominal cost. Although this test had not been standardized, as far as could be determined in correspondence with the publisher; yet, it provided a fair measure of the reading ability of the pupil, and was suitable, for all intents and purposes, to the situation in which it was to be used.

It is true that a test which has been tested for reliability, with grade norms accurately determined, is the most desirable. However, reliability of any test depends upon administrative factors which, in this case, could not be controlled perfectly, due to facts mentioned above. Owing to the simple instructions, no difficulty in administering the

tests<sup>1</sup> should be experienced by even an inexperienced teacher. It must be understood that this reading test was not a part of a continuous testing program; and, although it was the first ever given in McLean county on a county-wide basis, it was not intended that it should be the last. Aside from the use employed in this study of making a comparison between reading textbooks and reading ability, it served as a pupil diagnostic test, as well as a means of comparing schools in the county.

The reliability of the testing of the sixth, seventh, and eighth grades in 157 schools has been indicated (Table 20).

Table 20  
Tests for Reliability of Reading Test for Sixth, Seventh, and  
Eighth Grades in McLean County, November, 1937

Grade	Mean	Median	Number	Standard Deviation	Standard Error of the Mean	Standard Error of the Sigma
6	59.90	60.00	165	20.30	1.58	1.12
7	64.55	69.15	208	18.90	1.31	.92
8	79.10	80.32	226	16.40	1.09	.77

The standard error of the mean of 1.58 means that the chances are sixty-eight in 100 that a mean of 59.90 does not diverge from the true mean by more than 1.58 scores. Stated in another way, the chances are sixty-eight in 100 that the true mean lies within the limits of 58.32 and 61.48. We may be practically certain that the true mean of the sixth grade lies within the limits of plus or minus three times 1.58 or between the scores 55.16 and 64.64.

It is statistically certain that the true sigma for grade six

<sup>1</sup>Appendix A

would fall within the limits of 16.94 and 23.66. Measures of reliability for the other grades indicated comparatively small standard errors even though the test had not been standardized.

The distribution of scores in the reading test ranged from ten to 110 for the sixth grade, twenty to 110 for the seventh and from ten to 120 for the eighth grade. Since the tests were administered in the early part of the school term, the standard norms for one grade below that in which the pupils were working was used.

By considering the pupils as achieving the end products of the grade below, sixth grade scores were compared with the norms of the fifth grade, seventh grade scores were compared with the sixth grade norms, and eighth grade scores were compared with the seventh grade norms. Norms indicated by those who constructed the reading test<sup>1</sup> were: Fifth grade, sixty-three; sixth grade, seventy-nine; seventh grade, eighty-nine. In the testing in McLean county the sixth grade mean score was 59.9, or three and one-tenth points below the test norm; the seventh grade mean score was 69.23, or 9.77 points below the test norm; while the eighth grade mean score was 79.1, or nine and nine-tenths points below the test norm (Table 21).

---

<sup>1</sup>Appendix A

Table 21  
 Scores Made by Sixth, Seventh and Eighth Grade Pupils in  
 Reading Test in McLean County, November, 1937

Class Interval	Grades		
	6	7	8
110-119			2
100-109	6	13	24
90- 99	4	25	31
80- 89	20	27	61
70- 79	24	38	49
60- 69	30	43	29
50- 59	29	29	19
40- 49	19	18	9
30- 39	24	9	2
20- 29	8	7	
10- 19	1		
	N = 165	N = 208	N = 226
Test Norms	63.00	79.00	89.00
Mean Scores	59.90	69.23	79.10
Below Test Norms	3.10	9.77	9.90

Actually, the sixth graders should have been compared with a test norm of 5-2, or the fifth year and two months. Since the test had not been divided into convenient steps between grades, this comparison could not be readily made.

Without considering the two months of school which the pupils had had, it is quite evident that the reading ability of pupils in McLean county was considerably below the standard norm of the reading test.

In order to establish a numerical expression of performance for each district, the weighted means were calculated for each district and arranged in a frequency distribution (Table 22).

Table 22  
The Mean of Means in Reading for McLean County  
1937

Mean of Means in Reading	Number of Districts
90-92	1
87-89	0
84-86	4
81-83	5
78-80	5
75-77	5
72-74	5
69-71	10
66-68	2
63-65	6
60-62	3
57-59	3
54-56	3
	N = 52

The inventories taken in 1935 were used to establish the number of reading textbooks per grade and the sets of readers per grade per school. Inventories taken in 1938 showed a marked improvement in quality of textbooks, but the inventories of 1935 represented more of the average type of textbook which the pupils had used during the years in the elementary grades. It is generally recognized that reading can not be mastered in one or two years, but must be acquired throughout the years of elementary schooling. A number of years lost with poor textbooks cannot be regained in one or two years with good textbooks. The number of textbooks per grade (Table 23) and sets of readers per grade per school (Table 6) created a numerical expression for this part of the school equipment which could be used for comparison with other numerical values, such as, the scores made in a reading test.



Table 23

Number of Reading Textbooks Per Grade, Rural Schools  
McLean County, 1935

Sets of Readers per Grade	Number of Districts
9.5 to 10	1
9.0 to 9.5	0
8.5 to 9.0	0
8.0 to 8.5	1
7.5 to 8.0	2
7.0 to 7.5	2
6.5 to 7.0	2
6.0 to 6.5	4
5.5 to 6.0	5
5.0 to 5.5	3
4.5 to 5.0	6
4.0 to 4.5	7
3.5 to 4.0	4
3.0 to 3.5	6
2.5 to 3.0	6
2.0 to 2.5	3

$N = \frac{52}{3}$

The two sets of scores obtained, showing the mean of the means of the reading tests for each district and sets of readers per grade per school, were then arranged in parallel columns (Table 24).

These scores were then arranged on a scattergram and the coefficient of correlation ( $r$ ) calculated. A positive correlation of .10<sup>1</sup> was found. An  $r$  of .10 has a forecasting accuracy of only one-half of one per cent.<sup>2</sup> However, the probable error ( $PE_r$ ) of the correlation between the means of the reading test and the sets of readers per grade was .092. To be significant the  $r$  should be four times the  $PE_r$ .<sup>3</sup> In this case the limits of possibility fall within the limits of -.256 and .466; hence the correlation of  $r$  cannot be considered significant.

Pearson-Product-Moment Formula.

2K. A. Greene and A. N. Jorgensen, "The Use and Interpretation of High School Tests," 1936. P. 198.

3Henry H. Garrett, "Statistics in Psychology and Education," 1938. P. 200.

Table 24

The Mean of Means of Reading Test Scores (1937) and the Number of Sets of Readers per Grade per School (1935) McLean County

Means of Reading Test	Sets of Readers per Grade per School	Means of Reading Test	Sets of Readers per Grade per School
53.59	4.00	72.86	3.83
60.00	3.20	78.75	3.83
77.00	2.67	65.00	3.95
82.50	2.50	85.00	3.39
70.71	3.58	62.50	3.00
69.29	3.54	74.09	3.72
70.88	2.10	63.33	4.75
57.00	2.00	62.78	2.67
81.67	3.89	71.00	3.67
62.14	2.56	72.65	2.83
75.91	2.83	77.08	2.72
56.94	3.08	90.00	3.33
85.00	4.00	82.14	3.75
56.00	2.33	81.47	4.29
68.84	2.75	84.38	4.61
67.50	2.50	55.83	6.83
69.66	3.21	80.00	4.22
59.40	3.50	78.33	3.00
69.00	3.61	73.00	4.50
65.00	2.56	71.25	3.61
75.00	3.29	67.00	4.00
70.71	4.00	72.33	4.00
70.50	2.33	80.00	1.67
79.62	4.25	60.00	2.33
62.22	2.29	75.00	1.33
77.14	3.38		

Also the sets of scores obtained, showing the number of reading textbooks per grade for each district and the mean of means of pupil reading test scores, were arranged in parallel columns (Table 25).

Table 25

The Number of Reading Textbooks per Grade (1935) and the Mean of Means of Reading Test Scores (1937) McLean County

Reading Textbooks per Grade	Means of Reading Test	Reading Textbooks per Grade	Means of Reading Test
6.00	53.59	4.19	72.86
5.50	60.00	3.63	78.75
4.75	77.00	8.00	65.00
4.00	82.50	2.84	83.57
6.90	70.71	5.33	85.00
5.88	69.29	2.88	62.50
4.08	70.88	6.82	74.09
2.33	57.00	6.17	63.33
4.00	81.67	3.14	62.78
4.14	62.14	4.60	71.00
3.80	75.91	3.30	72.65
3.53	65.94	4.57	77.08
7.00	85.00	2.50	90.00
3.40	56.00	2.07	82.14
3.39	68.84	7.88	81.47
3.67	67.50	6.00	84.38
7.43	69.66	4.71	55.83
4.65	59.40	5.93	80.00
6.22	69.00	4.33	78.33
2.43	65.00	4.75	73.00
6.25	75.00	5.25	71.25
4.20	70.71	3.40	67.00
3.15	70.50	5.30	72.33
9.57	79.62	2.80	80.00
2.89	62.62	2.80	60.00
5.69	77.14	7.75	85.00

The scores were then arranged on a scattergram and the coefficient of correlation ( $r$ ) calculated. A positive correlation of .15<sup>1</sup> was found between the number of reading textbooks per grade and the mean of means of reading test scores. This would indicate a low percentage of forecasting accuracy between one-half and two per cent.<sup>2</sup> That even a slight relationship exists between sets of reading textbooks

<sup>1</sup>Pearson-Product-Moment formula.

<sup>2</sup>H. A. Greene and A. N. Jorgensen, "The Use and Interpretation of High School Tests." 1936. P. 198.

per grade and mean test scores in reading is of particular interest. However, the probable error ( $PE_r$ ) for this correlation is .085, with the probabilities falling within the limits of -.24, and .48; hence the .15 correlation is not significant.

A somewhat higher correlation was found between the eighth grade reading test scores and the percentage of seventh and eighth grade completions for a six-year period. Seventh and eighth grade completions per district ranged from a low of forty-two per cent to a high of ninety-nine per cent. Correlation between the eighth grade reading test scores and seventh and eighth grade completions was found to be .348;<sup>1</sup> again a correlation with a low percentage of forecasting accuracy of about seven per cent,<sup>2</sup> yet of interest because of its positive direction.

The coefficient of correlation between the eighth grade reading test scores and the seventh and eighth grade completions was .348 with a PE of .083. The limits of probability fall within the limits of .016 and .680; hence the r of .348 may be considered as significant. With more accurate and precise methods for evaluating reading textbooks, it is possible that further light may be thrown on this point. Until such time as these refined methods have been perfected, let it suffice to say, that there is a positive relationship between the number of sets of readers per grade and performance scores in reading, and between the number of readers per grade and scores in reading, and likewise a reliable positive relationship between scores in reading ability tests and the percentage of seventh and eighth grade completions.

<sup>1</sup>Pearson-Product-Moment formula.

<sup>2</sup>H. A. Greene and A. N. Jorgensen, "The Use and Interpretation of High School Tests." 1936. P. 198.

### Summary of Chapter 5

It was not assumed by the investigator that the presence of a large number of textbooks in reading per grade guaranteed effective instruction; it may be assumed, however, that they offer opportunity for effective instruction, and that there is likely to be a positive relationship between quantity of equipment and quality of instruction. It may be assumed, too, that skilled teachers will perform a higher type of service when provided with adequate textbooks; and, further, that children will perform schoolwork better when provided with good textbooks, to give them drill in skills that can be acquired and measured.

Reading tests administered to the sixth, seventh and eighth grades of the rural schools showed the sixth grade 3.10 points below the test norms, the seventh grade 9.77 below the test norms and the eighth grade 9.90 points below the test norms, indicating that all three grades were below grade level in reading.

A positive, but not reliable, correlation was found between the means of the reading test and the sets of readers per grade and also between the number of reading textbooks per grade and the means of the reading tests. A reliable correlation of .348 with a forecasting efficiency of about seven per cent was found between the eighth grade reading test scores and the seventh and eighth grade completions. The direction of the correlation is of particular interest, and may be verified when more reliable measures have been devised.

10/10/27

## CHAPTER 6

### CONCLUSIONS

This study was made to determine the number, type, and quality of equipment in use in the schools of McLean County, North Dakota; and some attempt was made to determine the sufficiency of the equipment in reading needed for good educational practice. In the light of the findings, a plan was suggested for improving the current situation under the existing laws which govern school district organization. Certain facts and recommendations may be appropriately stated in a summary of this study.

#### Summary of the Findings

The problem, as revealed in this study, was to investigate how adequately the schools of McLean County were equipped to provide the instruction that they purported to be offering the pupils. The study was limited to the physical equipment, exclusive of the buildings themselves. The study furnished evidence for the opinion that is generally accepted by schoolmen: that rural school equipment is not sufficient for doing good educational work in the one-room schools, and that many schools are even below the rather low standard set up by the state of North Dakota for equipment in those schools.

Proper and adequate textbooks in reading were shown by this study to have some bearing upon the success of pupils in that branch of learning. With the development of more precise measuring devices further substantiating facts may be revealed to bear out the facts presented in this study.

This study revealed that the lack of textbooks generally was due

to neglect by those in charge of the schools rather than to insufficient money, since textbooks were costing less than three cents out of each dollar spent for schools in the county. The same reason may account for the fact that more than one-third of the districts had fewer than four sets of readers per grade for each grade up to the sixth. That is the minimum requirement for classified schools in North Dakota. All the districts except one had failed to comply with the state law concerning the number of library books to be purchased, and forty-four per cent had a sufficient number of dictionaries. Seventy-one per cent had the recommended encyclopedias, fifty per cent had the recommended type of globes, sixty per cent had the required blackboard space, fifty per cent had the recommended heating and ventilating systems, eighty per cent had the recommended sanitary facilities, and fifty-five per cent of the schools had at least one piece of play equipment.

That the quality of textbooks had been neglected was shown by the detailed inventories on which teachers reported the conditions of their books. They used the following classification: "good" for new books or books in very good condition, "poor" for books marked up or older than 1925, "very poor" for books with pages missing, pages torn, and generally mutilated. According to this classification, only thirty-four per cent of all the books listed by the schools were considered "good;" forty-six per cent were "poor;" and twenty per cent were "very poor" (Table 26). The books in all subject matter fields were entirely inadequate in number. After this inventory was taken, a definite plan for the purchase of equipment was put into operation.

That this definite plan was partially effective is shown by a comparison of the inventories of 1935, before the plan was put into operation, and of 1938 after the county purchasing plan had been in operation for three years (Table 2 and Table 26).

Table 26

## Comparison of 1935 and 1938 Textbook Inventories

Year	Total Number Textbooks	Number Good	Number Poor	Number Very Poor	Per Cent Good	Per Cent Poor	Per Cent Very Poor
1935	14,983	5,152	6,890	2,941	34	46	20
1938	25,265	18,697	4,800	1,768	74	19	7

The percentage of "poor" and "very poor" textbooks remaining after three years of opportunity to replace them may indicate the measure of cooperation or non-cooperation on the part of school officers. In a general way it may be said that a district having sixty per cent "good" textbooks and forty per cent "poor" and "very poor" ones combined in 1938, had school officers with a rating of sixty per cent cooperativeness and forty per cent non-cooperativeness. Surely no school officer worthy of the title, who drives a car less than five years old or uses a tractor less than ten years old, would insist that children be denied the advantages of textbooks less than thirteen years old.

## Recommendations

The following suggestions are made to improve the method of selection and procurement of textbooks and equipment:

1. Place the management of schools in the hands of a county board of education, who shall appoint the county superintendent of



schools as its executive officer.

2. Place the responsibility of securing adequate equipment, as well as all other duties now delegated to local boards, in the hands of the county board of education, and provide that state tuition and other state funds be withheld for failure of the county board of education to comply with the laws and the regulations of the Department of Public Instruction.

3. Until such time as the county board of education shall be established, place at the disposal of the county superintendent of schools the state tuition and the county tuition funds, upon which he may draw orders on the county auditor for the purchase of textbooks, library books, and other equipment. All textbooks, library books, and other equipment shall become and remain the property of the county, to be used in the schools as necessity may require, under the direction of the county superintendent of schools.

4. Until such time as proper laws can be enacted to accomplish any or all of the above recommendations, active county superintendents of schools can make use of the county purchasing plan as outlined in this study. If the mechanics of a workable plan are provided, most school boards will cooperate by sanctioning the purchase of needed equipment.

This study has contributed to the solution of the problem of securing more adequate textbooks and equipment for the one-room schools, has pointed out the nature and extent of the problem, and has presented recommendations for a possible solution. The studies that follow should develop more accurate measuring devices for evaluating textbooks and

other equipment used in these schools, so that all pieces of equipment may be taken into consideration in measuring their efficiency.

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# STANDARD DIAGNOSTIC READING TEST

## Grades 3 to 8

Form A.

Name \_\_\_\_\_ Age \_\_\_\_\_ Grade \_\_\_\_\_  
 of School \_\_\_\_\_ Date \_\_\_\_\_ 19\_\_\_\_

### CHART SHOWING PUPIL'S STATUS IN SILENT READING

Grade	TEST I Rate	TEST II Fact Material	TEST III Vocabulary	TEST IV Following Directions	TEST V Total Meaning	TEST VI Central Thought	TEST VII Organization
	28	20	32	10		8	
9	27	19	31				
	26	18	30	9	10	7	10
			29				
	25	17					
			28				
8	24	16	27	8	9	6	9
	23	15	26				
7	22	14	25	7	8	5	8
	21	13	24				
6	20	12	23	6	7	4	7
		11	21-22				
	19		19-20				
		10	17-18				
5	18	9	16	5	6	3	6
	17	8	15				
			14		5		
	16	7	12-13				
4	15	6	11	4	4	2	5
	14		10				
	13	5	8-9		3		4
	12		7				
3	11	4	6	3	2	1	3
	10	3	4-5				
	8-9		3	2	1	0	2
	6-7	2	2				
2	5	1	1	1	0	0	1

Draw a circle around the number in each column representing the score obtained by the pupil in that test. Draw lines joining these circles. This makes a profile or graph of the pupil's reading ability, showing strong and weak points at a glance. The figures on line with grade number indicate standard for that grade in the several tests.

Published by  
 EDUCATIONAL PUBLISHERS  
 654 Normal Ave.,  
 Valley City, N. D.

## TEST II FACT MATERIAL

Form A.

**DIRECTIONS**—Answer each question using only one word, or as few words as possible.

A rabbit one day sat by a swamp, looking at the juicy plants on the other side. They were the only things to eat that he could see. He wanted to cross the swamp, but he could not swim.

1. Where was the rabbit? .....
2. What was on the other side of the swamp? .....
3. What could the rabbit not do? .....

Just then a lazy old alligator poked his nose above the water. "I might ask him to take me across," said the rabbit to himself. "But I am afraid that he is too proud to carry me, because he can walk and swim, too. Perhaps I can get across the swamp by playing a trick upon him. I will try it."

4. Who poked his nose above the water? .....
5. Did the rabbit ask the alligator to take him across the swamp? .....
6. Did the rabbit decide to play a trick on the alligator? .....

"You look warm, Friend Rabbit," said the alligator. "Why don't you come into the water? It is cool here." The alligator knew that the rabbit could not swim.

7. Who said "You look warm"?. .....
8. Was the water hot? .....
9. Did the alligator think that the rabbit could swim? .....

"I am not warm at all," said the rabbit, "but I am a little hungry. You see, there are a great many rabbits in the world. So, of course, it takes a great many green leaves to feed us. Oh, yes! Friend Alligator, we are a large family. There are many more rabbits than alligators."

10. How hungry was the rabbit? .....
11. Where did the rabbit say there are many rabbits? .....
12. Did the rabbit say there are more rabbits or more alligators? .....

"How foolish you are!" cried the alligator, angrily. "There are thousands and thousands of alligators in the world! There are more than a hundred alligators in this swamp! Can you find a hundred rabbits in the woods?"

13. How many alligators did the alligator say there are in the swamp? .....
14. How many rabbits did the alligator ask the rabbit if he could find in the woods? .....

"Certainly, I can!" said the rabbit. "I'll count the alligators, and then you may count the rabbits. Call the alligators together. Make a line of them across the swamp so that I can hop out upon their backs and count them."

15. Who was to count the alligators? .....
16. Where did the rabbit tell the alligator to make a line of alligators? .....

So the old alligator called and called. Up from the swamp came alligators, big ones and little ones. The old alligator made them into a line right across the swamp, just like a bridge. "Now count them, Friend Rabbit," he said. "If there are not more than a hundred alligators here, you may eat me!"

17. Were all the alligators that came big ones? .....
18. What was the line of alligators like? .....
19. Who said "You may eat me"? .....

The rabbit hopped on each alligator's back as he counted it. By the time he counted the last alligator he was on the other side of the swamp.

20. Did the rabbit get across the swamp? .....

Number right ..... (Score)

# TEST IV FOLLOWING DIRECTIONS

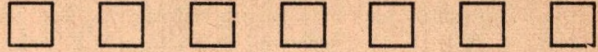
Form A.

DIRECTIONS—Do exactly what each paragraph tells you to do.

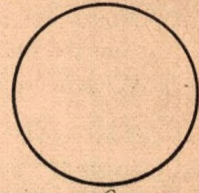
1. Two boys lived a short distance apart. The two squares are their homes. They visited each other quite often so that a path was worn from one house to the other. Make the path by drawing a line from one square to the other.



2. There are seven squares at the right. They stand for seven boxes. The box in the middle has a broken bottom and must be repaired. Put an X on this box so it will not be used until repaired.



3. The circle shows the shape of a flower garden. A man has four kinds of flowers to plant and he wants to plant the same amount of each. Make a dot in the center of the circle and then draw lines from this dot to divide the circle into four equal parts.

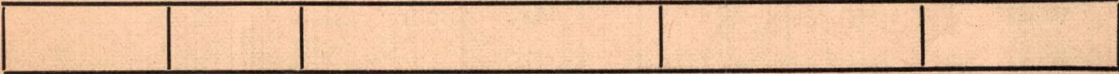


4. Cross out all even numbers except the fourth and seventh.
- 1    2    3    4    5    6    7    8    9    10    11    12    13    14    15

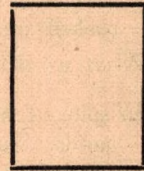
5. Draw a line from the first square to the fourth square which passes over the second square and under the third square.



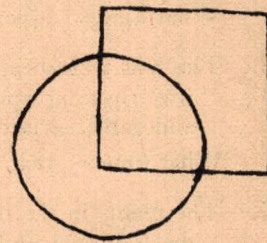
6. In the diagram below, place the figures 1, 2, 3, 4, and 5 in the spaces in the order of their size, 1 being placed in the largest space.



7. When oil is poured in a can of water, the oil comes to the top and the water remains at the bottom. The can at the right was half full of water and was then filled up with oil. The oil filled the top half of the can. Draw a line dividing the oil from the water.

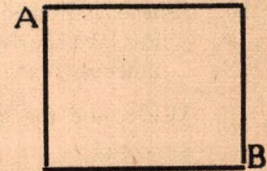


8. Place an X in that part of the circle that is outside of the square and place a 3 in that part of the square that is outside of the circle.



9. Cross out 1 and every second odd number thereafter.
- 1    2    3    4    5    6    7    9    10    11    12    14    15

10. John lived on the corner marked A and the schoolhouse stood on the corner marked B. Draw a line showing the way John went from his home to the school if he went the shortest way by cutting across the field.



Number right ..... (Score)

# TEST VI CENTRAL THOUGHT

Form A.

**DIRECTIONS**—Place an X after the statement that best tells the main thought of the paragraph.

<p>1. Hunting wild animals is a dangerous sport. A bear, when wounded, is a bad animal to face. He will often rush at the hunter and try to kill him. Wolves, too, may attack fiercely when hungry or in packs. Hunters are often injured by accidents.</p>	<p>A hunter must be strong. ....</p> <p>Hunting is dangerous. ....</p> <p>There are more wolves than bears. ....</p> <p>Bears kill men. ....</p>
<p>2. Rain makes the grass grow. All plants grow best when they get the right amount of water. Some plants need much more water than others but all need some. The cactus uses very little water.</p>	<p>Grass needs rain. ....</p> <p>The cactus is the best plant. ....</p> <p>All plants need water. ....</p> <p>Plants cause rain. ....</p>
<p>3. Ships travel many days through storms and sunshine to cross the ocean. Sailors once thought the ocean was boundless. When crossing the ocean even at its narrowest place neither shore can be seen for days.</p>	<p>The ocean is very large. ....</p> <p>Ocean storms are dangerous. ....</p> <p>The ocean has sunshine. ....</p> <p>Sailors feared the ocean. ....</p>
<p>4. To those who love nature, Northern Minnesota is a fairy-land of natural beauty. Northern Minnesota is sometimes called the land of lakes for there are many beautiful lakes there. The tall pine trees make good lumber but they also add to the beauty of the landscape. In the autumn the leaves are beautiful in their many colors.</p>	<p>Northern Minnesota is full of natural beauty. ....</p> <p>Northern Minnesota is a lumber country. ....</p> <p>The lakes of Minnesota are beautiful. ....</p> <p>Autumn is the most beautiful season. ....</p>
<p>5. In a great country such as ours a good government is needed to protect the people, and to do many things that the people cannot do for themselves. It provides schools, roads, and many useful services. Health protection is another duty of the government.</p>	<p>This is a great country. ....</p> <p>The government serves the people. ....</p> <p>The government provides schools. ....</p> <p>The government protects people's health. ....</p>
<p>6. The Statue of Liberty is so solidly built that very few repairs have ever been needed. Even the terrific explosion of the munitions stored at "Black Tom," on the New Jersey shore, which occurred shortly before we entered the World War, did no damage to the statue, though some of the wreckage reached the Brooklyn bridge several miles farther away.</p>	<p>The Statue of Liberty is very strong and well built. ....</p> <p>The explosion was felt a long way off. ....</p> <p>Stored munitions cause explosions. ....</p> <p>Wreckage flew a long distance. ....</p>
<p>7. Cabbage, although a good food, is excluded from many homes because of its offensive odor during and after cooking. Especially during colder seasons, when houses are closed, the odor of boiled cabbage seems to linger on and on, and one entering from the outside is immediately aware of it.</p>	<p>Cabbage is a good food. ....</p> <p>Cooked cabbage has an offensive odor. ....</p> <p>Boiled cabbage is good winter food. ....</p> <p>The odor of cabbage is noticeable only to those entering from outside. ....</p>
<p>8. With Latin peoples, business and language, also business and social life are closely related. We are doing more business today with Latin America because we are becoming better acquainted. As we learn to talk their language that business will increase. The numerous United States ships unloading in every South American port prove the extent and value of our commerce with those countries.</p>	<p>Latin peoples like to trade with people they know and like best. ....</p> <p>We are becoming better acquainted with Latin America. ....</p> <p>Latin peoples like to do business with strangers. ....</p> <p>Ships prove the value of commerce. ....</p>

Number right ..... (Score)

## STANDARD DIAGNOSTIC READING TEST

Grades 3 to 8

Form A

## Directions for giving test.

The total time required to give this test is about 30 minutes. A watch with a second hand should be used in timing the several tests. Time should be accurately kept.

To give the test, begin by holding up a copy of the test and saying, "I am going to hand you a reading test. As soon as you get your copy, fill in the spaces on the front page (point to spaces) giving your name, age, grade, name of school, and the date. Do not open or turn the booklet over until you are told to do so." (Now have the tests passed and placed on the desks right side up.)

When all have finished filling in the front page, continue by saying, "Now pay close attention while I explain what you are to do. You must play fair and do your best. Never start any test until you are told to do so, and always stop promptly when you are told to stop. If you should finish any test before you are told to stop, raise your head and sit quietly until you are given instructions to go on to the next test. Do not look at the next test until you are told to do so."

"Now open the booklet to test number one and listen carefully while I tell you what to do. When I say go, begin to read as fast and carefully as possible and continue reading until I say stop. When I say stop, draw a line around the last word you read. Ready, go." (Allow exactly 1 minute.) Then say, "Stop! Mark the last word you read and turn to the next test, TEST II, on the next page."

"On this page there are several paragraphs, each with a number of questions. When I say, begin, you will read the first paragraph and answer the questions by writing the answers on the lines after the questions. Use only one word when possible. When you have finished the first, go right on to the others. Ready, begin." (Allow exactly 3 minutes) then say, "Stop! Now turn to TEST III on the next page."

"On this page is a list of words each followed by four other words, one of which means the same or nearly the same as the first word in the line. You are to draw a line under the word that means the same and then write the number of the word you draw the line under in the parentheses at the end of that line just as it shows in the sample at the top of the page. Ready, begin." (Allow exactly 3 minutes) then say, "Stop! Now turn to TEST IV on the next page."

"This is a test to show how accurately you read. Each paragraph tells you to do something. Read each paragraph carefully and do exactly what it tells you to do. Ready, begin." (Allow exactly 3 minutes) then say, "Stop! Turn to TEST V on the next page."

"Here are several paragraphs and beneath each is a question followed by four words one of which correctly answers the question. Draw a line under that word as shown in the sample at the top of the page. Ready, begin." (Allow exactly 2 minutes) then say, "Stop! Turn to TEST VI on the next page."

(Continued on last page)



TEST V

TEST VI

TEST VII

The words  
underscored  
should be:

1.  
Hunting is dangerous. X

1. winter

2.

All plants need water. X

2. quiet

3.  
The ocean is very large. X

3. hot

4.

Northern Minnesota is full of natural beauty. X

4. rich

5.

The government serves the people. X

5. talkative

6.

The Statue of Liberty is very strong and well  
built. X

6. excited

7.

Cooked cabbage has an offensive odor. X

7. harvest

8.

Latin Peoples like to trade with people they know  
and like best. X

8. field

9. fishing

The first group of statements  
should be numbered as follows:

4

1

3

2

The Christmas Wishes

6

4

2

1

5

3