

A COMPARATIVE STUDY OF CONSOLIDATED, ONE-
ROOM RURAL, AND URBAN SCHOOLS IN IOWA

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Signatures have been redacted for privacy

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INTRODUCTION

There has been considerable controversy about the advantages and disadvantages of consolidated schools as compared with one-room rural schools and urban schools. Advocates of consolidation believe that the consolidated school gives the country child most of the advantages of the town school. The opinion has been often expressed that the one-room rural school does not give the child broad enough opportunities. The supporters of the one-room school retaliate by pointing to the great cost of consolidation.

It was the object of the writer of this thesis to find out the actual condition of affairs in Iowa. An attempt was made to assemble figures from a large enough area to serve as guide to some phases of relative cost and efficiency of the three different types of schools.

METHOD OF OBTAINING FIGURES

A number of County Superintendents of Schools were requested to send to Ames copies of their 1922-23 annual reports to the State Superintendent of Schools, so that the writer could study them at leisure. Eleven county superintendents complied with the request. Four copies were found unsuitable and were not used. The remainder of the reports; those from Hamilton, Grundy, Greene, Tama, Polk, Jasper and Boone Counties were in good order. Our figures were worked out from these seven reports.

It was decided to divide the schools into three groups for the purpose of comparison. (1) Town schools, or independent district schools in towns with a population of over two thousand, (2) consolidated schools and (3) one-room rural schools.

BASIS OF COMPARISON OF SCHOOLS

In general, an attempt was made to compare the schools on the basis of the plan set forth by the Russel Sage Foundation. However, it was found necessary to leave out some of the headings in this list and to add others.

The Russel Sage Foundation Plan for
Comparison of Schools

1. Percent of school population attending school daily.
2. Average days attended by each child of school age.
3. Average number of days schools were kept open.
4. Percent that high school attendance was of total attendance.
5. Percent that boys were of girls in High Schools.
6. Average annual expenditure per child attending.
7. Average annual expenditure per child of school age.
8. Average annual expenditure per teacher employed.
9. Expenditures per pupil for purposes other than teacher's salaries.
10. Expenditures per teacher for salaries.

Actual Basis of Comparison

The superintendents' reports were unsatisfactory in that it was impossible to find the average number of days attended by each child, the number of days the schools were kept open, the percentage that high school attendance was of total attendance, the percentage of boys and the expenditures for pupils other than for teacher's salaries. The items considered in this thesis were as follows:

1. Number of teachers, male and female.
2. Average compensation of men teachers per month.
3. Average compensation of women teachers per month.
4. School population (Number between 5 and 21 years)
5. Number between 7 and 16 years (school age)
6. Number enrolled in school.
7. Average attendance.
8. Average attendance per teacher.
9. Average tuition per month.
10. Percent that attendance is of school population.
11. Value of school houses.
12. Value of apparatus.
13. Number of schools.
14. Number of volumes in libraries.
15. Total receipts.
16. Cost of transportation.
17. Percentage of children transported.
18. Number of children transported.
19. Cost per child transported.
20. Percentage that number enrolled is of school population.
21. Percentage that attendance is of number enrolled.
22. Number of library books per pupil enrolled.
23. Number of library books per school
24. Value of school houses per child.

25. Value of apparatus per child.
26. Amount of money raised per child.
27. Number of children enrolled per teacher.

REVIEW OF THE LITERATURE

Most of the literature at hand deals with comparison of consolidated schools with the one-room rural type as to standards, efficiency, and cost.

O. H. Greist of Randolph County, Indiana* found that in an area of 460 square miles, with agriculture the chief industry, under a consolidated school system, 96 per cent of the eighth grade pupils enter high school.

Extensive study of consolidated and one-teacher schools in nineteen states by John M. Foote (26) shows advantage in favor of consolidation; i.e., children continue in school longer.

Professor David Snedden (42) thinks that for districts where most of the land is tilled and where

Note: For explanation of numbers in brackets refer to corresponding numbers in the bibliography.

* Source not known.

transportation of children is not too expensive, consolidation will be the rural school system of the future.

R. W. Powell (38) in the Journal of Rural Education, expresses the opinion that with properly qualified teachers and good supervision, the one-teacher school may do good work.

The one-room rural school has only a comparatively small collection of library books. Ruth B. Drake (19) in an article entitled "The Consolidated Rural School Library" says that "the consolidated school makes possible a larger library, which may have a librarian and serve the whole community".

Mr. E. C. Lindeman, (34) writing from the viewpoint of the sociologist, says that an up-to-date school is the centre of a community. "The consolidated school may employ specialists who may act as community leaders".

John M. Foote (25) in 1923 made a study of instruction in consolidated and one-teacher schools. He studied 135 consolidated and 374 one-teacher rural schools in nineteen states. In the 135 consolidated schools there were 10,999 pupils; in the one-teacher schools, 4,653 pupils. The holding power of the consolidated school proved superior to that of the one-teacher schools. Rate of progress was practically the

same. The only outstanding advantage of consolidated schools according to this survey seems to be the superior qualifications of the teachers.

Fifty-six per cent of elementary teachers in the consolidated school had had two years or more above high school, while only twenty-eight per cent of the one-room school teachers were similarly trained. The average tenure of service in the consolidated schools was 2.55 years, compared with 1.67 years in the one-teacher schools.

According to Orville Brims (8) study of Rural School conditions in New York State, in 8400 one-teacher rural schools, ten per cent of teachers have not gone beyond elementary school. Thirteen per cent of buildings were seventy-five years old. The average size of the school grounds was one-quarter acre. Eighty-four per cent of the schools had no playground equipment whatever.

A 1923 Kansas survey⁽⁴⁹⁾ showed that in one-teacher schools, only forty-eight per cent of children attended school, while ninety per cent attended in third class city schools.

Grace G. Stanley (40) says that city schools have advantages over rural ones in superior organization, equipment, division of labor, higher pay, more secure tenure of teachers, more extended social contacts,

and greater opportunities for study and growth, but thinks that city advantages have been over-rated.

Two thousand three hundred and eleven consolidated school children and one thousand three hundred and five one-teacher and two-teacher school children were tested with Buckingham Stevenson place geography tests.

(45) In fifth grade the average on World Geography for consolidated schools was 12.3 and on United States Geography 9.9. The average for one-teacher schools on World Geography was 4.1 and on United States Geography 6.7. Sixth grade consolidated school children's average on World Geography was 23.7 and on United States 16.6. One-teacher sixth grade average on World Geography was 11.2 and on United States 11.2. Seventh grade consolidated school children's average was 37.6 on World and 23.3 on United States. The one-teacher seventh grade average was 26.8 on World and 20.8 on United States Geography. It will be seen that all the way through there is a decided difference in favor of the consolidated school, probably due to superior teaching and equipment.

George Knorr (33) says that farmers pay more attention to consolidated school boards than to school trustees. "Consolidation makes higher standards of country life".

Rachael Fuller (27) in an article in the Journal of Rural Education of February 1924, says that 62 per cent of school children in the United States go to schools which may be classed as rural schools. "Thirty-four per cent go to one-teacher schools. These thirty-four per cent have not an equal chance with the others."

Vaughan McCaughey (35) points out the great inequality in schools in length of school year, quality of teachers, and quality of school buildings and equipment. "Teachers salaries constitute a reliable indicator of the quality of school service. Low salaries can attract only cheap and poorly prepared teachers, immature and looking upon teaching as a mere stepping stone. Good salaries command good services".

Cost of Consolidated Schools

The cost of consolidated schools is an important item. The consolidated school at Redfield, Iowa (48) was built at a cost of two hundred sixty-two dollars per pupil. "This school is greatly in advance of the one-room rural school in equipment and buildings".

Professor Macy Campbell (11) says that school tax in consolidated districts stands half-way between that of good city districts and rural districts. He places the average city district tax at 90.5 mills, the average consolidated district at 50.2 mills and the average one-roomed rural at 25.3 mills.

T. C. Holy (31) compares consolidated districts with independent districts as to cost. He made a survey of 221 consolidated districts with an enrollment of 53,730, with 92 independent second class city districts with 88,388 enrollment.

The average number in high school was 60 in the consolidated schools, and 261 in the city schools.

The average cost per pupil in the grades of consolidated schools was \$78. In the city schools the cost per grade pupil was \$63. The cost per high school pupil in consolidated schools was \$241; in city schools \$125. The excessive cost of consolidated high school is undoubtedly due to the small number attending.

Transportation of Children

The biggest problem of consolidation is transportation. The cost of transportation varies greatly. In an article by Jas. F. Abel, entitled, "Consolidation

of Schools in Iowa" in School Life Vol. VIII Number 8, April 1923, the average per pupil per year was placed at \$47.23.

According to figures gathered in 1923-24 by Mr. Geo. H. Kellogg, Superintendent of Schools for Story County, the average cost of transportation per pupil in the fifteen consolidated schools of Story County was \$4.33 per month. Sixty-nine horse drawn and thirty-two motor vehicles were used by the fifteen schools. Allowing for nine months of school, this makes the average cost per pupil \$39.07 per year in Story County. The lowest cost, \$3.14 per pupil per month, was obtained at Fernald Consolidated School, where four horse drawn vehicles were used. The highest cost, \$5.99 per pupil per month, occurred at Collins Consolidated School where nine motor vehicles were used. In every case the motor vehicles seem to increase the cost. It is probable, however, that the use of motor vehicles is warranted by the saving of time on the road and increased comfort of the children.

Professor Macy Campbell (15) says that more than a million dollars annually is spent, in Iowa on transportation for consolidated schools. The smallest consolidated district in Iowa is sixteen square miles. (15) Some districts use horse drawn busses, some motors, and some a mixture. Thirty-nine districts in Iowa were

surveyed to get ideas on cost of transportation. On the horse drawn routes the cost per pupil per year was \$40.62 and on the motor routes \$45.03. The lowest cost was \$28.17 per pupil per year. The highest cost was \$53.66. The difference was largely due to difference in salary of drivers. The lowest cost resulted from the district supplying everything and paying the drivers by the month. Some other states have lower figures than Iowa.

EXPERIMENTAL

The following tables were assembled by the writer from the 1922-23 annual reports of seven county superintendents of schools to the State Superintendent.

There was no town in Grundy County with a population of more than two thousand so the town school figures are taken for only six counties. There are thirty-six consolidated schools and six hundred and sixty-seven one-room rural schools in the seven counties. A very few of these rural schools have two rooms, but not enough to materially affect our figures.

TABLE I

Data Relating to Number of Teachers
and to Compensation of Teachers

County	Number of Teachers			% That Men Teachers are of Total Teachers	Average Compensation per Month	
	Male	Female	Total		Male	Female
Town Schools						
Hamilton	4	45	49		251.03	139.59
Greene	5	27	32		205.55	135.00
Tama	3	16	19		251.70	128.33
Polk	87	760	847		201.36	169.11
Jasper	14	80	94		252.38	132.77
Boone	7	83	90		239.09	135.25
	<u>120(1)</u>	<u>1011(1)</u>	<u>1131(1)</u>	<u>10.61(2)</u>	<u>212.60(3)</u>	<u>160.58(3)</u>
Consolidated Schools						
Hamilton	4	33	37		206.94	116.82
Grundy	8	45	53		230.36	130.78
Greene	11	68	79		225.10	116.69
Tama	4	27	31		287.77	131.63
Polk	15	71	86		204.33	117.75
Jasper	5	16	21		175.05	105.75
Boone	11	40	51		204.92	121.17
	<u>58(1)</u>	<u>300(1)</u>	<u>358(1)</u>	<u>16.20(2)</u>	<u>215.38(3)</u>	<u>120.32(3)</u>
One-room Rural Schools						
Hamilton	4	103	107		77.28	82.06
Grundy	3	82	85		77.26	84.18
Greene	4	70	74		93.00	83.06
Tama	2	123	125		87.29	85.47
Polk	2	37	39		125.00	98.73
Jasper	6	154	160		106.25	89.67
Boone	1	97	98		70.00	79.35
	<u>22(1)</u>	<u>666(1)</u>	<u>688(1)</u>	<u>3.19(2)</u>	<u>92.95(3)</u>	<u>85.35(3)</u>

- (1) Total of column
 (2) Percentage of totals
 (3) True average of column

TABLE II

Data Relating to Number of Children
and Number Enrolled

County	: School : Population		: Number : between : 7 and 16 years		: % That : Number Enrolled : is of : School : Population	: Number : Enrolled : per : Teacher	
	: Male	: Female	: Male	: Female			
Town Schools							
Hamilton	895	860	584	577	1551		
Greene	411	436	260	302	881		
Tama	307	320	247	238	561		
Polk	18768	19693	12082	12299	27722		
Jaspar	1257	1334	703	772	2378		
Boone	2065	1885	1137	1116	2869		
	<u>23703(1)</u>	<u>24528(1)</u>	<u>15013(1)</u>	<u>15304(1)</u>	<u>35962(1)</u>	<u>79.57(3)</u>	<u>31.79(4)</u>
	45231 (2)		30317(2)				
Consolidated Schools							
Hamilton	472	516	345	312	937		
Grundy	698	716	434	450	1258		
Greene	1147	1046	814	721	2022		
Tama	464	418	296	277	759		
Polk	1022	1159	701	765	2079		
Jaspar	246	238	209	206	471		
Boone	679	661	437	365	1233		
	<u>4728(1)</u>	<u>4754(1)</u>	<u>3236(1)</u>	<u>3096(1)</u>	<u>8759(1)</u>	<u>92.37(3)</u>	<u>24.56(4)</u>
	9482(2)		6332(2)				
One-room Rural Schools							
Hamilton	1191	1036	810	768	1884		
Grundy	1237	1123	846	892	1525		
Greene	893	795	662	591	1268		
Tama	1373	1520	1180	1077	1973		
Polk	775	736	477	513	1097		
Jaspar	1968	1743	1322	1221	2932		
Boone	1385	1199	1028	847	1817		
	<u>8822(1)</u>	<u>8152(1)</u>	<u>6325(1)</u>	<u>5909(1)</u>	<u>12496(1)</u>	<u>73.77(3)</u>	<u>18.16(4)</u>
	16974(2)		12234(2)				

- (1) Total of column
(2) Grand total of two columns
(3) Percentage of totals
(4) Total number of pupils enrolled divided by total number of teachers

TABLE III

Data Relating to Number of Schools, Attendance,
and to Average Tuition per Month

County	: Number of Schools	: Average Attendance	: Average Attendance per Teacher	: % That Attendance is of School Population	: % That Attendance is of Enrolled	: Average Tuition per Month
Town Schools						
Hamilton		1120	22.85			6.59
Greene		740	23.12			6.27
Tama		477	23.52			5.88
Polk		21770	25.70			6.71
Jaspar		2087	22.20			6.69
Boone		2394	26.60			5.40
		<u>28588(1)</u>	<u>25.27(2)</u>	<u>63.20(3)</u>	<u>79.49(3)</u>	<u>6.57(2)</u>
Consolidated Schools						
Hamilton	4	814	22.00			5.75
Grundy	4	1137	21.45			6.44
Greene	7	1676	21.21			6.86
Tama	3	645	20.80			7.99
Polk	10	1768	20.55			6.39
Jasper	2	394	18.76			6.78
Boone	6	1053	20.64			6.92
	<u>36(1)</u>	<u>7487(1)</u>	<u>20.91(2)</u>	<u>78.96(3)</u>	<u>85.47(3)</u>	<u>6.64(2)</u>
One-room Rural School						
Hamilton	102	1325	12.38			6.28
Grundy	84	1145	13.47			6.16
Greene	74	877	11.85			7.03
Tama	25	1458	11.66			7.60
Polk	39	762	19.53			4.96
Jasper	148	1947	12.16			7.19
Boone	95	1311	13.37			7.34
	<u>667(1)</u>	<u>8825(1)</u>	<u>12.82(2)</u>	<u>51.99(3)</u>	<u>70.62(3)</u>	<u>6.80(2)</u>

- (1) Total of column
 (2) True average of column
 (3) Percentage worked from totals

TABLE IV

Data Relating to Value of School
Houses and Apparatus

County	: Value of : School : Houses	: Value of : Apparatus	: Value of : Apparatus : per child : Enrolled	: Value of : Schoolhouses : per Child : Enrolled	: Value of : Apparatus : per child : Enrolled	: Value of : Schoolhouses : per Child : Enrolled
Town Schools						
Hamilton	400,000	25,000				
Greene	150,000	2,200				
Tama	100,000	2,000				
Polk	6,494,950	800,000				
Jasper	505,000	25,000				
Boone	310,000	7,500				
	<u>7,959,950(1)</u>	<u>861,700(1)</u>	<u>23.96(2)</u>	<u>221.34(3)</u>	<u>19.05(4)</u>	<u>175.98(5)</u>
Consolidated Schools						
Hamilton	265,500	7,200				
Grundy	444,000	7,700				
Greene	692,000	19,500				
Tama	285,000	8,500				
Polk	775,310	45,177				
Jasper	27,000	4,943				
Boone	455,000	20,910				
	<u>2,940,810(1)</u>	<u>113,930(1)</u>	<u>13.00(2)</u>	<u>335.74 (3)</u>	<u>12.01(4)</u>	<u>310.14(5)</u>
One-room Rural Schools						
Hamilton	90,485	9,853				
Grundy	101,025	10,913				
Greene	43,225	6,347				
Tama	123,000	10,480				
Polk	54,300	9,356				
Jasper	183,350	11,827				
Boone	80,477	8,965				
	<u>675,862(1)</u>	<u>67,741(1)</u>	<u>5.42(2)</u>	<u>54.08(3)</u>	<u>3.99(4)</u>	<u>39.81(5)</u>

- (1) Total of column .
 (2) Total value of apparatus divided by total number of children enrolled.
 (3) Total value of school-houses divided by total number of children enrolled.
 (4) Total value of apparatus divided by total number of children enumerated.
 (5) Total value of school-houses divided by total number of children enumerated.

TABLE V

Data Relating to Library Books and
to Total Receipts

County	: Number : of : Volumes in : Library	: Number of : Volumes : per : Pupil : Enrolled	: Number of : Volumes : per : Pupil : Attending	: : Number of : Volumes : per : School	: : Total : Receipts
Town Schools					
Hamilton	850				144,582
Greene	400				119,716
Tama	1294				58,141
Polk	5000				2,930,813
Jasper	3729				226,897
Boone	7700				188,889
	<u>18973(1)</u>	<u>.52(2)</u>	<u>.66(3)</u>		<u>3,669,038(1)</u>
Consolidated Schools					
Hamilton	2800				109,444
Grundy	2945				172,291
Greene	5302				242,353
Tama	1417				108,219
Polk	6753				251,513
Jasper	1175				71,261
Boone	2808				185,250
	<u>23200(1)</u>	<u>2.64(2)</u>	<u>3.09(3)</u>	<u>644.00(4)</u>	<u>1,140,331(1)</u>
One-room Rural Schools					
Hamilton	7809				156,869
Grundy	5023				148,764
Greene	4135				116,678
Tama	7904				14,890
Polk	2967				237,026
Jasper	12230				314,635
Boone	8496				157,748
	<u>48564(1)</u>	<u>3.88(2)</u>	<u>5.50(3)</u>	<u>72.00(4)</u>	<u>1,146,610(1)</u>

- (1) Total of column
(2) Total number of volumes divided by total number of children enrolled
(3) Total number of volumes divided by total number of children attending
(4) Total number of volumes divided by total number of schools

TABLE VI

Data Relating to Amount of Money Raised per Child
and to Transportation of Children

County	: Amount of : Money : Raised per : Child : Enrolled	: Amount of : Money : Raised per : Child : Enumerated	: Cost of : Trans- : portation	: % of : Children : Trans- : ported	: Number : of : Children : Trans- : ported	: Cost : per : Child : Trans- : ported
Town Schools						
Hamilton						
Greene						
Tama						
Polk						
Jasper						
Boone						
	<u>\$102.02(2)</u>	<u>\$ 81.11(3)</u>				
Consolidated Schools						
Hamilton			13,747		463	29.69
Grundy			24,321		559	43.50
Greene			34,183		1039	32.96
Tama			10,093		462	21.84
Polk			44,705		1267	35.28
Jasper			8,147		244	33.39
Boone			31,073		841	36.94
	<u>130.19(2)</u>	<u>120.26(3)</u>	<u>166,269(1)</u>	<u>65.09(4)</u>	<u>4873(1)</u>	<u>34.12(5)</u>
One-room Rural Schools						
Hamilton						
Grundy						
Greene						
Tama						
Polk						
Jasper						
Boone						
	<u>91.75(2)</u>	<u>67.55(3)</u>				

- (1) Total of column
(2) Amount of money raised divided by number of children enrolled
(3) Amount of money raised divided by number of children enumerated
(4) Total number of children transported divided by total average attendance and multiplied by 100
(5) True average of column

Salaries of Teachers

It will be seen that the average compensation per month is slightly higher for men teachers in consolidated schools than for men teachers in town schools. (table I) This is probably due to the fact that a higher percentage of men teachers in consolidated schools are superintendents and principals than in town schools.

The salaries of women teachers in consolidated schools are lower than those of women in town schools because few women in consolidated schools are even principals, while in grade schools in town quite a number of women have high-priced positions.

The one-room rural school teachers' salaries, both men's and women's, are markedly lower than those in either the town or consolidated schools. If teachers salaries are, as we believe, reliable indicators of the quality of school service, the rural school is only about two-thirds as efficient in this respect as are the consolidated schools and town schools.

Wm. C. Bagley (4) says that during 1923, city teachers received an average salary of \$1653, village and town teachers \$1141, and one-roomed rural teachers \$729. These figures are not markedly different from our own.

Percentage of Men Teachers

According to Bureau of Education Bulletin 1923 No. 29 (48) the number of men teachers in all schools in Iowa is a little less than ten per cent of the total number of teachers. In 1910 the number of men teachers was only slightly over eight per cent of the total number. In practically all states there has been an increase of men in the teaching profession, probably due to an increase in salaries. Our figures for town schools were 10.61 per cent men teachers; for consolidated schools, 16.20 per cent; and for one-room rural schools 3.19 percent. (table I)

We believe that men teachers are in general more valuable than women teachers, because of their broader experience and stronger power of leadership. The boys in particular need men teachers. Our survey shows that the consolidated school easily leads in percentage of men teachers and that the number of men teachers in one-room rural schools is almost negligible. Then too, judging from the salaries of the men teachers in one-room rural schools they are probably mostly poorly prepared boys.

School Population and Number Enrolled

By "school population" we mean the number of children between five and twenty-one years of age. There seems to be about an equal number of boys and girls in town and consolidated schools and a few more boys than girls in the one-room rural schools. (table 2) The same is true of the number between seven and sixteen years of age.

The consolidated schools show a considerably higher percentage enrolled than do either the town or the one-room schools. (table 2) This seems to show that the consolidated school supporters appreciate the value of their schools more than do the people of towns or of one-room rural school districts.

Attendance and Tuition

The figures for consolidated schools show an attendance of 85.47 per cent of the number enrolled, as compared with 79.49 per cent in the case of towns and 70.62 per cent in one-room rural schools. (table 3)

The town schools had an attendance of 63.20 per cent of the school population. One-room rural schools had 51.99 per cent of the school population in attendance and consolidated schools had 78.96 per cent. (table 3)

Statistics of 1920 (46) show the attendance for all types of schools to be 67.8 per cent of the children 5 to 18 years.

The figures for average attendance per teacher show the town schools to be leading, with four more pupils per teacher than have the consolidated schools and twelve more than one-room schools. (table 3) The town and consolidated schools have higher priced, better qualified teachers teaching more pupils than is the case in the one-room schools.

The heading "Average Tuition" is rather unsatisfactory. No one seems to have any clear-cut idea as to what is included in "tuition". It happens that the figures for all these types of schools are very similar, with the figures for town lowest, consolidated schools medium, and one-room schools slightly highest. The writer believes that "tuition" in this case includes only the cost per pupil for teachers salaries.

Transportation

The cost of transportation is an interesting item. Sixty-five and nine hundredths per cent of consolidated school pupils were transported at a total cost of \$116,269 or \$34.12 each. (table 6) This figure

does not seem excessive.

Value of Schools and Equipment

The consolidated schools seem to have most money per child, invested in schools. (table 4) The one-room rural school figures \$39.81 per child, and even the town school figures, \$175.98 per child seem small compared with the \$310.14 per child invested in school buildings in the case of consolidated schools. Probably quite a number of the consolidated schools were built during the period of high prices, whereas the town schools and one-room rural schools were built a number of years ago, and probably the latter are in many cases very much depreciated.

In apparatus per child (table 4) the town schools lead by a good margin. They are evidently better equipped for laboratory work etc. than are consolidated schools. Just how much is included in apparatus is not definitely known, but it will be seen that one-room rural schools are very deficient in this respect.

School Libraries

From the reports it was impossible to find how many libraries there were in the town schools, consequently, the number of volumes per library could not be obtained for town schools. The number of library volumes per child in town schools is low, probably for two reasons.

(1) Town pupils have access to the public library, and

(2) The schools are larger and thus less books per child are needed in the school libraries.

The consolidated schools have 2.64 library books per child compared with 3.88 books per child in one-room rural schools. (table 5) It will be seen that the cost of books per pupil is higher in one-room rural than in consolidated schools or town schools. However, we find that there are only 72 books per school library in the one-room rural schools, while there are 644 books per library in the consolidated schools. This means that the one-room rural school child's field is limited compared with the others. It seems that the consolidated schools have a greater number of library books per school than the town schools. As mentioned elsewhere, the consolidated

school library serves the community as well as the school.

School and Equipment Costs

The amount of money raised per child enumerated (table 6) shows that the consolidated school is more expensive than either of the other types. The one-room rural school is cheapest, and the town schools are intermediate in cost.

The value of apparatus column (table 4) shows that the town schools are equipped best of all, the consolidated schools are intermediate and the one-room rural schools are most poorly equipped. This column is not very satisfactory because the value of "apparatus" is not definite enough. It does not include the same thing in all cases.

For every child enumerated in consolidated schools in these seven counties, over \$310 is invested in schoolhouses. (table 4) This seems rather high. The town schoolhouses are valued at \$175.98 per child enumerated, and the one-room rural school houses at \$39.81 per child. This latter is ridiculously low, being considerably less than \$800 per school.

The Consolidated School Versus the
Standardized Rural School

There are in Iowa 9,767 rooms in rural schools which have in attendance, a part or all of the elementary grades. These are the one and two-room rural schools. It has been shown that the average of these schools is woefully deficient in equipment, quality of instruction, and breadth of curriculum. An attempt has been made to improve these rural schools by setting up certain standards and offering special inducements to those schools which meet the requirements. The following extract quoted from the Report of the Department of Public Instruction for the biennial period ending June 30, 1924 explains the situation quite well.

"The three hundred and eighty-eight consolidated schools of Iowa are distributed over ninety counties. In these schools approximately eighty-one thousand pupils are enrolled, fifty-nine thousand of whom are in the grades and twenty-two thousand are in the high school. Approximately two thousand grade teachers and seventeen hundred high school teachers are employed in these schools at an average salary of one hundred five dollars and fifty-five cents (\$105.55) for grade teachers and one hundred forty-eight dollars

and three cents (\$148.03) for high school teachers, exclusive of superintendents.

Approximately forty-six thousand of the consolidated school pupils are furnished free transportation to and from school. For this work seventeen hundred horse busses and one thousand motor busses are used. One hundred forty-five schools reported using horse busses exclusively and eighty-six schools reported using motor busses exclusively. The cost of transportation cannot be determined accurately from school records submitted, as in many instances the drivers' salaries alone were figured in determining costs with no accounting for depreciation and up-keep of equipment. On the basis of the figures submitted the average cost per pupil per year for each pupil transported was thirty-six dollars.

The average mill levy reported from the consolidated school districts for the school year 1923-1924 was fifty-six and forty-eight hundredths mills, the lowest levy being twenty mills and the highest one hundred twenty-six and two-tenths mills.

For the school year 1923-1924 three hundred fifty-four of the consolidated schools maintained approved four year high schools.

On account of economic conditions many Iowa farm communities have felt the consolidated school

tax to be a burden.

The standardized rural school law passed by the 38th General Assembly had recognized the necessity and the desirability of extending direct financial aid and encouragement to the one-room rural school. The appropriation of \$200,000 made at that time is the first money ever sent back from the state treasury to the schools of the farmers of Iowa -- the one-room rural schools.

While our colleges and high schools are open to all in theory, the fact yet remains that more than one-fourth of all the children of the state get all their schooling in these one-room rural schools and this state of affairs will continue for many years to come.

The plan of standardization has been invaluable in raising the standard of the rural schools of the state as it has improved the type of building. Instead of the unattractive, inefficient box model, the new buildings have modern plans employing in most cases finished basements, modern light, heating and ventilating systems, and often chemical toilets. The standardized school law provides as follows:

1. The law applies to any school located in a district other than a city, independent, or consolidated

district not maintaining a high school course.

2. The standardized school must have eight months of school each year.

3. It must have suitable grounds, building and out-houses kept in good repair. The building must be properly heated and ventilated and suitably furnished and equipped.

4. The teacher must have a first-grade certificate or its equivalent and must be engaged to teach throughout the entire term. The average daily attendance must be ten or more pupils.

5. The district receives \$6.00 for each pupil who attended the school, during the year. One-half of this money is added to the teacher's salary which allows the country school to offer at least ONE other inducement in its attempt to keep some of the best teachers in the rural schools instead of allowing the towns to take them all. Under the law the teacher of a standard school must have superior qualifications, and greater effort and more work is expected of her."

The Place of the Standardized School

In 1924 there were 1134 standardized rural schools in Iowa (47) with an attendance of 19,727 or

17 pupils per teacher. The average salary of teachers in these schools was \$90.07 per month. The average salary for the over nine thousand one-room rural teachers was \$85.67.

The problem before us is this -- what place should the standardized rural school have in Iowa? At present there seems to be a desire among farmers to standardize rather than to consolidate. This is undoubtedly due to the cost of some consolidated schools which were built during the period of high building costs.

Without a doubt the standardized school is far superior to the old unstandardized one-room school. However, the charges against one-room schools in general, i.e., narrow curriculum, poor opportunity for children to get a high school education, small library, etc., apply to the standardized school as well. If these fairly expensive standardized schools are scattered throughout the state, will they not tend to delay consolidation? In Ontario, Canada, the consolidated school has made little progress because the farmers refuse to discard the quite substantial brick one-room rural schools that already exist.

Opinions of County Superintendants

In an effort to get the opinions of the County Superintendants of schools on the comparative value of the standard school and the consolidated school, the writer interviewed the Superintendent of Schools for Cherokee County and wrote to twelve others. Miss Burrell, Superintendent for Cherokee County expressed the opinion that while the consolidated school was far superior to the standard school in that it gave many children a chance for high school education that would not otherwise have had it, the cost at present is holding up the building of consolidated schools. She believes that the standard school should be introduced wherever there is little probability of consolidation.

Mr. A. E. Harrison, Superintendent of Schools for Buena Vista County says that there are many instances in Iowa where it would be impracticable to organize a consolidated school, and in these cases we should do all we can to improve the small one-room school. "The consolidated school is by far the best plan where it can be organized conveniently and where the problems of transportation are not too difficult to solve". He says that the consolidated school in most places is the real solution of our rural problem and should be encouraged in every way. He attributes the present pause

in organization of consolidated schools to economic conditions and not to unsatisfactory results.

Mr. W. N. Leeper, Superintendent of Schools for Johnson County says that from the standpoint of the quality of work done the consolidated school is so far ahead of the standardized school that there is no comparison between them. He says that the consolidated school has better teachers, better organization, better equipment, and higher ideals and that the only thing that can be said in favor of the standardized school is that the cost is less.

Mr. Chas. A. Young, Superintendent of Schools for Guthrie County in his reply, says that on the average the consolidated school is better than the standardized school. "The requirements for standardization are; standard equipment, teacher with first grade certificate and a certain average attendance.

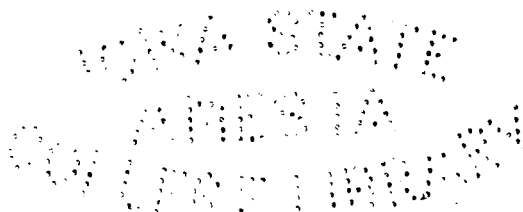
"The success of a school in my estimation is not due to equipment etc., but to the ability of the teacher and not all teachers who hold first grade certificates are successful teachers."

He points out the fact that if a consolidated school engages a teacher and she proves weak in any branch of her work the superintendent has an excellent opportunity to help her overcome the difficulty. In

the case of the weak teacher in the one-teacher school, the county superintendent has so many teachers under his supervision that it is impossible for him to help very much in remedying defects.

Mrs Jennie B. Herbster, Superintendent of Schools for O'Brien County writes, "To my mind there is no comparison between the one-room rural school even though standardized and the consolidated school if the latter is thoroughly organized. With a very good teacher the work in a one room standardized school might be as thorough as the work done in a graded system, but when that is said it is about all said, as the consolidated school fills a different place in a community".

Mrs Herbster says that the consolidated school, if organized and conducted properly, should be the center of the community's interest in almost everything. Young people can live at home and go to high school instead of being away in town under almost no restraint. She thinks that the consolidated school is the school of the future, but that it is inadvisable to rush construction of buildings under present financial conditions.



These five County Superintendents are unanimous in their support of consolidated schools. No reply was received from the other eight county superintendents to whom the writer wrote for information.

SUMMARY

A brief summary of the conclusions arrived at by the writer from a review of the literature and from the tables assembled, is as follows:

1. A greater percentage of rural children get high school education under consolidation than under one-room school conditions.
2. Education is broader in consolidated schools than in one-room schools.
3. The percentage of men teachers is highest in consolidated schools, lowest in one-room schools, and intermediate in town schools.
4. The average compensation of men teachers is about the same in consolidated schools and town schools, but much lower in one-room rural schools.
5. Women teachers salaries are highest in towns, lowest in one-room schools and intermediate in consolidated schools.

6. The consolidated school serves the community much better than the one-room school by acting as a center of social activities.

7. Better prepared teachers are employed in consolidated schools than in one-room schools.

8. The average attendance per teacher is greatest in town schools, slightly less in consolidated schools, and least in one-room schools.

9. A considerably higher percentage of children attend school in consolidated districts than in either towns or one-room school districts.

10. Children attending consolidated schools have access to a much larger number of library volumes at less cost per child than have one-room school children.

11. The amount of money raised per child enrolled in town schools, consolidated schools and one-room rural schools is in the proportion of ten, thirteen and nine dollars respectively. (table 4)

12. The value of school houses per child enrolled in town schools, consolidated schools and one-room rural schools is in the proportion of four, six and one dollars respectively. (table 4)

13. The value of apparatus per child enrolled in town schools, consolidated schools and one-room rural schools is in the proportion of twenty-four, thirteen and five dollars respectively.

14. Approximately sixty-five per cent of children in consolidated schools in these seven counties are transported at public expense. (table 6)

15. The average cost of transportation per child in these seven counties is approximately thirty-five dollars per year. (table 6)

CONCLUSIONS

While this thesis is a comparison of three different types of schools, the greater part of it centers around a comparison of consolidated and one-room rural schools. School workers have been trying for years to give rural children as great educational advantages as those of children in towns. The one-room school has not done this, and its most ardent supporters do not claim that it ever will. The consolidated school, with good organization, does give advantages which closely approximate those of town schools.

According to literature referred to in this thesis, and to the opinions of people interviewed, there are only two serious disadvantages in consolidation; first, the cost has been excessive as compared with that in one-room schools, and second, transportation is in some cases difficult. In the writers

opinion these two handicaps can be overcome. The reasons for the high cost of consolidated schools are not hard to find. A great many consolidated schools were established during the period of high building costs. Poor judgment was used; the buildings in some cases are more elaborate than they need to be. Because of the inexperience of the founders of these schools there was more waste than was necessary.

Transportation has been difficult and expensive largely because of a lack of good roads and because the proper type of vehicles was not used.

The building of consolidated schools for the present has practically stopped, not because of any fault in the type of school, but because of present financial conditions. There is every reason to believe that as soon as good trunk roads are developed and other conditions permit, the organization and building of consolidated schools will be resumed wherever it is practicable to establish them.

In this comparative study a great deal of attention has been paid to consolidated schools. Conditions have radically changed since the time of Lincoln. The consolidated school promises to meet the new conditions of rural life and to equalize educational opportunities of rural children as nothing else so far thought of can do.

BIBLIOGRAPHY

1. Arp, J. P. Rural education and the consolidated school.
World Book Company, 1918.
2. Abel, Jas. F. Consolidation of rural schools in Iowa.
School Life, Vol. VIII, No. 8, April 1923.
3. Baylor, A. S. The next step in the study of consolidation.
N. E. A. Proceedings, 1920. p. 138-41
4. Bagley, W. C. How shall opportunities be equalized?
National Education Ass'n Journal
13:315, Dec. 1924.
5. Baylor, A. S. Report of the sub-committee on consolidation of rural schools.
Nat. Educ. Ass'n Proceedings, 1921,
p. 352-3.
6. Betts, G. H. Better rural schools.
The Bobbs-Merrill Company, 1914.
7. Brim, Orville, The rural elementary school and its community relations.
Journal of Rural Education, 2:441,
June 1923.
8. Brim, Orville, Handicaps of the rural child
Journal of Rural Education, 2:52,
Oct. 1922.
9. Butterfield, Kenyon L. The country church and the rural problem.
The Univ. of Chicago Press, 1911.
10. Butterfield, Kenyon L. The education of rural people.
Journal of Rural Education, 2:166-174
Dec. 1922.

11. Campbell, Macy, The consolidated schools.
Wallaces' Farmer, 48:217, Feb. 9,
1923.
12. Campbell, Macy, Sidelights on consolidation.
Journal of Rural Education,
2:258-60, Feb., 1922.
13. Campbell, Macy, Bringing up the rear in education
in Iowa.
Journal of Rural Education, 3:162
Dec., 1923.
14. Campbell, Macy, The standardizing of consolidated
schools.
Journal of Rural Education 2:265
Feb., 1923.
15. Campbell, Macy, Transportation in Iowa's consolidated
schools.
Journal of Rural Education, Feb.,
1924.
16. Certain, C. C., The elementary school library defined
in dollars and cents.
N. E. A. Proceedings, 1923, p. 646
17. Crawford, P., Rural schools that serve effectively
N. E. A. Proceedings, 1920 pp. 274-
75.
18. Gubberly, Elwood P., Rural life and education
Houghton Mifflin Company, 1914.
19. Drake, Ruth B., The consolidated school library.
N. E. A. Proceedings, 1922, p. 995.
20. Driver, Lee L., The consolidation of rural schools.
N. E. A., Proceedings, 1922, p. 1207.
21. Eggleston, Joseph Dupuy, The work of the rural
school.
Harper and Brothers, 1913.
22. Finney, Ross Lee, Administration of village and
consolidated schools.
The Macmillan Company, 1920

23. Foght, H. W., The American rural school
The Macmillan Company, 1912
24. Foght, H. W., The rural teacher and his work.
The Macmillan Company, 1917
25. Foote, John M., A comparative study of instruction in consolidated and one-teacher schools.
N. E. A. Proceedings, 1923, p. 812.
26. Foote, John M., A comparative study of instruction in consolidated and one-teacher schools.
Journal of Rural Education, 2:337
April, 1923.
27. Fuller, Rachael, The country child's chance.
Journal of Rural Education, 3:275
Feb., 1924.
28. Galpin, Charles J., Rural Life.
The Century Company, 1918.
29. Hartman, G., The child and his school.
E. P. Dutton & Co., 1922.
30. Hollister, H. A., The administration of education in a Democracy.
C. Scribner's Sons, 1914.
31. Holy, T. C., Relation of size to cost of operation of certain schools in Iowa.
Journal of Rural Education, 3:317
March, 1924.
32. Kennedy, Joseph, Rural life and the rural school
American Book Company, 1915.
33. Knorr, George W., A study of 15 consolidated rural schools; their organization, cost efficiency and affiliated interests.
Publication No. 6, pp. 46-55,
Southern Educational Board, Wash. D.C.
34. Lindeman, E. C., Some unsolved problems of rural education from the viewpoint of sociology.
N. E. A. Proceedings, 1922, p. 1110.

35. McCaughey, Vaughan, The unfair distribution of school opportunities.
Educational Review, 67:130, March 1924.
36. Moore, Robert, Inequalities in school opportunities in Illinois.
American School Board Journal, 69:80 Dec., 1924.
37. Myers, Charles E., The one-teacher school, front and center.
Journal of Rural Education, 3:439, May-June, 1924.
38. Powell, R. W., The case of the one-teacher school.
Journal of Rural Education, 4:69-72 Oct., 1924.
39. Samuelson, Agnes, Consolidation, supervision and administration of a county system of schools.
N. E. A. Proceedings, 1922, p. 229.
40. Stanley, Grace G., The new rural school and its interdependence with the city school system.
N. E. A. Proceedings, 1923, p. 643.
41. Vogt, Paul L., Introduction to rural sociology.
W. Appleton and Company, 1917.
42. Snedden, David S., Agricultural education: desirable programs for the future.
Vocational Education Magazine, 2:1032 Nov., 1924.
43. Snedden, David S., School reports and school efficiency.
The MacMillan Company, 1911
44. Comparative costs in education.
Educational Research Bulletin, Sept. 3, 1924.
45. Snedden, David S., Educational sociology.
The Century Company, 1922.
46. U. S. Bureau of Education Bulletin No. 29., 1923

47. Iowa Dept. of Public Instruction, Report for the
Biennial period ending June 30, 1924.
48. Four Iowa consolidated school buildings.
American School Board Journal
69:56-61, Dec. 1924.
49. Abel, J. F., Fifty-fifty
Rural School Circular No. 7,
Dept. of Interior, Bur. of Ed.,
1923.
50. Rapeer, Louis W., The consolidated rural school.
Charles Scribner's Sons, 1920.