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Efficiency of Consolidated Schools

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Breeding,

S. A.

1935

EFFICIENCY OF CONSOLIDATED SCHOOLS

BY

S. A. BREEDING

A THESIS

SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

WESTERN KENTUCKY STATE TEACHERS COLLEGE

AUGUST, 1936

Approved:

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 Department of Education
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Time has not permitted the exhaustive study of minute details and the extensive scope that the subject really should have had. Care has been taken, however, to compile carefully and interpret all the available material that could be secured in the limited time. It is trusted that the information compiled in this volume will be found of help and interest to administrators, supervisors, and teachers, as well as the lay public. It is further desired that this may lead to further study in this or other fields that relate to efficiency of various types of schools.

Much of the credit for the merit and value of this work is due to Dr. Lee Francis Jones, head of the Education Department, Western State Teachers College, Bowling Green, Kentucky. It was under his faithful, sincere, and conscientious guidance that this study was made. Indebtedness is also due to Dr. Gordon Wilson, head of the English Department, in the same institution, for his careful direction and criticism. Sincere appreciation is due to Dr. F. C. Grise, Dean of the College and Director of the Graduate School, and to Mr. E. H. Canon, Registrar, who have been a source of inspiration, not only during the author's connection with the institution as a graduate student, but in undergraduate work and in other pleasant connections.

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CHAPTER I

INTRODUCTION

I. History and Present Status of Consolidation

1
According to Monroe, the history of consolidation is briefly as follows: The first state to pass an act permitting the consolidation of schools was New York (Union School Law of 1853, amended and incorporated as Title IX of the Consolidated School Act of 1864). This was followed by the passing of an act by Massachusetts, in 1869, permitting both the consolidation of schools and the expenditure of funds for transportation. In 1874 the law was put into operation for the first time by the town of Quincy, but it was not until 1890 that the movement gained much headway or the expense for transportation in the state reached \$25,000. Since that time the progress of the movement has been rapid.

The movement was not taken up in any other state until 1889, when the Connecticut Legislature first authorized the consolidation of districts. The next legislation was in 1893, when Connecticut authorized the expenditure of funds for transportation and Maine authorized the consolidation of schools. Rhode Island and New Hampshire followed in 1898, and Vermont in 1902. Pennsylvania authorized the expenditure of school money for transportation in 1897, and the consolidation of schools in 1901. Ohio first

1
Paul Monroe, Cyclopedia of Education (New York, The Macmillan Co. 1911), II, 187-189.

authorized the consolidation of one township in 1894, permitted the consolidation in three counties in 1896, and made the law state-wide in 1898. Indiana first authorized consolidation and transportation in 1899. In some of these states local authorities had previously introduced such plans without state authorization.

Partly because of the greater density of population and partly because of the large number of small schools previously maintained, the movement has made much headway in New England states. In Massachusetts no figures as to the cost for transportation were kept before 1889, when the yearly expenses reached \$22,118. By 1897 they had exceeded \$100,000; by 1905 they had exceeded \$200,000; and at the present amount to close to \$300,000. This is equal to about $1\frac{1}{4}$ per cent of the total cost of the school system of the state. In Connecticut 81 of the 168 towns had consolidation and were transporting pupils by 1909, and from 45 to 80 schools are being closed each year. The cost of transportation is about 1 per cent of the cost of the system. In Vermont and Maine nearly 4 per cent of the total cost of the schools is expended for transportation of pupils from abandoned schools.

Perhaps the greatest development of the plan has been in the states of the North Central Division, all of which, except Illinois, have laws permitting the formation of consolidated schools and the transportation of pupils. All new laws enacted in this group of states have been passed since 1894.

Among the Southern States some marked progress in the consolidation of small schools has been effected since 1900, North Carolina, Georgia, Florida, and Louisiana being most conspicuous in the work. In the Western Division all laws on the subject have

been enacted since 1902. Many different means of transportation are employed in various states.

At present the greatest headway in consolidation appears in regions where it is least favorable geographically for it. The great field for consolidation is where the most one-room schools are. In a recent study made by the United States Bureau of Education it was found that the overwhelming majority of one-teacher schools are to be found in the Mississippi River valley. The problem of consolidation is closely associated with the problem of transportation but in this great middle western territory this problem is not so acute as in the mountain sections. In Massachusetts, Connecticut, and Rhode Island the consolidation movement has been pushed almost to the limit of practicability. Few one-room schools remain where consolidation and transportation are feasible. In the West consolidation has made much headway. The leading states in the movement are Colorado, Utah, and Washington. In the South the movement is going on rapidly. The leading states are Louisiana, Mississippi, Texas, Georgia, South Carolina, and Tennessee. Many states in the Middle West have made much progress in consolidating their rural schools.

3
II. Huffaker's Study.

2
Alfred Don Mueller, Progressive Trends in Rural Education (New York and London, The Century Co., 1926), p. 52.

3
C. L. Huffaker, A Survey of the Schools of Lane and Klamath Counties, Oregon (University of Oregon, Publishing Co., Education Series, Vol.III, No.2, 1932), p.98.

Problem

To study the efficiency of the county unit and district systems in Klamath County, county unit, and Lane County, district unit.

Data

Comparison in four points:

- 1. School Plant
- 2. Teaching Staff
- 3. Expenditure
- 4. Pupil Achievement

Conclusion

- 1. The county unit showed better results.
- 2. In the county unit the rural and larger schools were about equal in achievement, but much difference in favor of larger schools in the district system showing administration and consolidation made the difference. The district would perhaps show up as well if it had:

- 1. More finance
- 2. Better administration

A like grouping of city schools of Lane County shows that the typical pupil has an intelligence quotient of 100.3 but an educational quotient of 107.4. The city schools of Klamath County show a similar trend, having a Median Intelligence Quotient of 106.8 and a Median Educational Quotient of 106.8. These comparisons indicate that the smaller district schools are not securing the same type of educational results as the other schools considered. The smaller schools under the county unit are secur-

ing the same type of results, the level of ability being considered, as the city schools. A direct comparison of the different sized schools for the two counties shows a marked trend in Lane County for superior achievements to be found in the larger schools. This trend is present in Klamath County schools to a much smaller degree. The same condition may be described by saying that under the county unit system the small school approaches rather closely the achievement attained by the larger schools, while under the district system the larger schools are distinctly superior. In other words, the county unit system of Klamath County is securing results in even one-room schools that are approaching rather closely those secured in the larger schools. The fact that the smaller schools of Klamath County are very close in achievement to the larger schools suggests that the size of the school may not be as important in determining achievement as certain other factors.

In the Klamath County system an effort has been made to improve the one-room schools through the selection of more capable teachers. The teachers begin their teaching in the larger schools, where they are under direct supervision. After they have proved themselves to be capable teachers, they are placed in one-room schools, where they receive a bonus in addition to the regular salary, as a recognition of their superior teaching ability.

III.

Kyte's Study

⁴
George C. Kyte, Part I, Thirtieth Year Book of the National Society for the Study of Education (Bloomington, Ill., Pub. School Printing Co. 1931).

Problem

To determine the status of rural education.

Data

Statistics gathered from various sources

Conclusions

Relative to instruction in consolidated and one-teacher schools

1. In general, the age grade status of the rural school child who continues in school is relatively the same as that of the child in the city schools.

IV. Comparative study of instruction in consolidated and one-teacher schools by Foote, Allan, Cooper, Frost, and Staker. ⁵

Problem

In which of the two outstanding types of rural schools, the consolidated and the one-teacher, are the results of instruction superior?

Data

The grade and age achievement of the pupils in the fundamental elementary subjects: reading, arithmetic, language, spelling, and handwriting.

Comparison of two systems is commonly based on grade achievement only, but age achievement is measured here because it is

⁵
John M. Foote, H. A. Allan, C. G. Cooper, Norman Frost, L. F. Hanifan, and M. R. Staker, A Comparative Study of Instruction in Consolidated and One-Teacher Schools (Proceedings of the National Educational Association, 1923), p.812.

equally significant. No mental tests were used. It was assumed that the general intelligence of each group was about equal.

The tests used were:

1. Reading, Monroe Standardized Silent Reading Tests
2. Arithmetic, Woody-McCall Mixed fundamentals
3. Language, Trahue Language Scales, B and C
4. Spelling, The Iowa Spelling Scale
5. Handwriting, The Ayers Handwriting Scale, Gettysburg Edition

Extent of Study

1. Number of states.....	19
2. Number of consolidated schools.....	135
3. Number of one-teacher schools.....	374
4. Number of state directors.....	19
5. Number of local cooperators.....	139
6. Number of pupils in consolidated schools.....	10999
7. Number of pupils in one-teacher schools.....	4653

Treatment of Data

These data were treated statistically.

Conclusion

1. The study has been sufficiently extensive in area, the number of schools, and the number of pupils to constitute a satisfactory sample or cross section of instruction in the consolidated schools and in the one-teacher schools in subjects tested.
2. Pupils in the one-teacher schools are .14 of a year younger than are those in the consolidated schools.
3. The holding power of the consolidated schools is superior to that of the one-teacher schools in the upper grades.

4. The rate of progress from grade to grade is nearly equal in the two schools; pupils advance about as rapidly in one type as in the other.

5. There is a significant difference in the results of instruction in each grade tested in favor of consolidation.

6. When the grade achievement differences are converted into terms of yearly progress, the range is from 18 to 40 per cent of a year in favor of the larger type of school, with a general median difference of 27 per cent.

7. The subject achievement difference ranges from 10 to 44 per cent, with a general median difference of 27.5 per cent. The greatest difference is found in rate and quality of handwriting. Comprehension of reading takes next rank. The smallest difference is arithmetic.

8. The grade-achievement difference increases from grade to grade. It is distinctly larger in the three upper than in the three lower grades.

9. The age-achievement differences are in favor of the consolidated schools. They tend to confirm the grade achievement comparisons.

10. When converted into terms of yearly progress, the age achievement difference ranges from 13 to 56 per cent of a year, with a median of age medians of 33 per cent. While the per cents are somewhat greater, they are in general agreement with grade achievement comparisons.

11. The age achievement differences increase with the advanc-

ing ages.

12. Five of the fourteen administrative facts reported in Table VIII compare important conditions to favor each type of schools by significant amounts. The fifth qualification of teachers is decidedly in favor of the consolidated school.

At the conclusion of this study the following questions are raised:

1. Why is there so small a difference in the results of instruction between the two types of schools?
2. The most significant administrative difference herein reported is that of teacher qualification. To what extent does this account for instructional differences favoring the consolidated schools?
3. Is the consolidated school realizing all its opportunities?
4. Have we not erected costly buildings, installed elaborate equipment, set extensive organizations, and assumed that they would produce superior results?
5. Does not the study create a higher regard for what the one-teacher school is accomplishing?
6. The movement for consolidation contemplates the abandonment of the one-teacher school and the transportation of all the pupils to the central school. Would it be wise to recommend, in the light of the report, some modification of this program?

V. Consensus of Opinion

For convenience we may divide the public into two groups as

to their opinions on consolidation and one-teacher schools: those who take the philosopher's point of view and those who rely on measurements of various kinds.

The following reasons for consolidation from the Encycloped⁶ia Britannica may be quoted, perhaps, as being fairly typical of the theorist's point of view:

Advantages of Consolidation

1. Better classification and gradation of pupils is made possible and classes large enough to stimulate rivalry and enthusiasm in the work of the school.
2. The number of grades a teacher must handle and the number of recitations are materially reduced, while the length of recitations is materially increased.
3. The curriculum can be enriched by the introduction of instruction in agriculture, home economics, manual training, music, art, and nature study.
4. The larger school unit makes possible buildings with better equipment in heating, ventilation, lighting, and sanitary conveniences, as well as professionally trained teachers, modern teaching equipment, and supplies.
5. Consolidation makes possible longer terms of school than the small district usually can afford, provides supervision of instruction, higher salaries for teachers, and lengthens the tenure of office.

⁶
Encyclopedia Britannica, Fourteenth Edition.

6. Transportation, which is an essential feature of consolidation, provides for placing of children under the care of a responsible person in traveling to and from the school.

7. Enrollment in the school is increased, and absences and tardiness are reduced to a minimum.

8. It brings together at one place enough pupils to permit or organized play and games, making it possible to utilize the educational value of play, which is largely lost in the small district school.

9. It offers to rural children and rural communities all the desirable advantages which the city children now enjoy.

Recent studies have caused some doubt in the minds of educators as to the superiority of consolidated schools over the one-teacher schools.

VI.

Reasons for Making this Study

There are two reasons for making this study:

1. The comparative efficiency of the consolidated and one-teacher schools.
2. The consideration of the cost.

According to Abel, ⁷ 23 of the consolidations studied had property worth more than \$500 for each enrolled pupil. The average for seven states in 1922 was less than \$50, while only five states and the District of Columbia had an average above \$200, the highest being \$226. Only 65 of the 236 consolidations that

⁷
J. F. Abel, "A Study of 260 School Consolidations," Bulletin No. 32, U. S. Bureau of Education, Washington, 1924.

reported have school property per enrolled pupil valued at less than the average of the United States.

Unless consolidated schools are more efficient, there is a great loss in their maintenance.

VII Statement of Problem

It is the purpose of this study to further compare the relative scholastic achievements of pupils in consolidated and one-room schools.

CHAPTER II

SET-UP OF STUDY

I. Name and Description of Standardized Tests Used

Three standardized tests were used in the present study of the efficiency of consolidated schools. One test is on reading, one is on arithmetic, and the third is an intelligence test.

The test on reading is the Sangren-Woody Reading Test, Form B, for grades 4 to 8. This test was devised to test pupils in speed and comprehension in silent reading.

The test on arithmetic was the New Stanford Arithmetic Test. This test is divided into two parts as follows:

1. Arithmetic Reasoning
2. Arithmetic Computation

The third test of the series to be given was the Otis Self-Administering Test of Mental Ability, Form A, for grades 4 to 9. This test contains seventy-five questions covering a field of general information.

II. Why reading, arithmetic, and intelligence tests Were Given in Preference to Others.

Reading was chosen on the assumption that it is a fundamental subject, and the success of other subjects depends on the efficiency of the pupil in reading. Arithmetic was chosen because of its practical importance and because of the general impression that it is a more useful subject than any other. An intelligence test was used to determine the relative ability of

the two groups being tested.

III. Administering of Tests to Consolidated Schools

In the early part of 1933, in the school year 1932-33, the series of tests were administered to the fifth, sixth, seventh, and eighth grades of the Russell Springs Graded and High School, at Russell Springs, Russell County, Kentucky. The same series of tests were also administered to the same grades at Jamestown, Kentucky, in the same county. The total number of pupils in the fifth and sixth grades in the two schools was 64, and the total number of pupils in the seventh and eighth grades in the schools was 38. These two schools are the only ones in the county except one-room and two-room schools.

IV. Administering of Tests to One-Room Schools

In the latter part of 1933, the series of tests were administered to 62 fifth and sixth grade pupils and 38 in the seventh and eighth grade group, in the one-room schools of the same county. Two-room schools were avoided because of advantage or disadvantage the larger schools may have over the one-room schools. In both consolidated and one-room care was taken to follow directions for administering carefully.

CHAPTER III

ANALYSIS OF DATA

The following tables show the actual results of the standardized tests used in this study. Table I shows the intelligence and achievements in reading and arithmetic for the consolidated and one-room schools for grades five and six. Most of the points, it will be noted, are in favor of the consolidated group. No allowance is made for the fact that the one-room group has only seven, and sometimes six, months, while the consolidated group has a nine-months' term of school each year. Because of roads and other conditions, the consolidated school has also a larger attendance.

It will be observed in Tables I and II that both consolidated and one-room schools made considerably higher grades in arithmetic than in reading. These tables also show that there is more difference between the two groups in arithmetic for grades seven and eight, and also for grades five and six except in Q1, where there is a greater difference in reading for grades seven and eight. The aggregate ages of the one-room group for all the grades studied is higher than for the consolidated group. It was found that the aggregate chronological ages of the consolidated group, grades five and six, were 749 years, and of the one-room group 802 years. The aggregate age of the consolidated group, grades seven and eight, were 528 years and of the one-room group, grades seven and eight, were 575 years. The greatest difference between the

two groups is in the I.Q. The median I.Q. of the grades five and six of the one-room group is only a little over 78 per cent of the median I.Q. of the grades five and six in the consolidated group. The median I.Q. of grades seven and eight of the one-room group is less than 78 per cent of the median I.Q. of the consolidated group for grades seven and eight.

TABLE I
RESULTS OF STANDARDIZED TESTS, GRADES FIVE AND SIX

	I.Q		Reading		Arithmetic	
	Consolidated	One-Room	Consolidated	One-Room	Consolidated	One-Room
Q 3	101.6	80.25	5.89	4.9	7.35	5.73
Difference	21.35		.99		1.62	
M	97.25	73.75	5.19	4.06	6.3	5.08
Difference	23.5		1.13		1.22	
Q 1	83.75	65.25	4.99	3.65	5.2	4.35
Difference	18.5		1.34		.85	
Aggregate Years			709-2	615-0	782-11	677-11
Difference			94-2		105-0	
Average Years			11-0	9-8	12-3	10-11
Difference			1-4		1-4	
Aggregate Grades			340.6	257.2	407.8	315.2
Difference			83.4		92.6	
Average Grades			5.32	4.0	6.37	5.08
Difference			.82		1.39	
Range Age			5-8	6-7	7-4	5-7
Difference			1-1			1-9

TABLE II
RESULTS OF STANDARDIZED TESTS, GRADES SEVEN AND EIGHT

	I.Q.		Reading		Arithmetic	
	Consolidated	One-Room	Consolidated	One-Room	Consolidated	One-Room
Q 3	107.5	84.5	7.45	6.08	9.85	7.87
Difference	23		1.37		1.98	
M	93	75.25	6.225	5.2	8.3	6.64
Difference	17.75		1.023		1.66	
Q 1	83.125	69.25	5.03	4.56	6.25	5.85
Difference	13.87		.47		.4	
Aggregate Years			458-6	428-7	532-10	481-5
Difference			31-11		51-5	
Average Years			12-1	11-3	14-3	12-8
Difference			-10		1-7	
Aggregate Grades			238.9	209.8	309.3	260.4
Difference			29.1		48.9	
Average Grades			6.28	5.52	8.14	6.85
Difference			.76		1.29	
Range Ages			6-0	5-5	11-5	7-9
Difference				-7		3-8
Range Grades			5.6	5.3	10.5	8.0
Difference				.3		2.2

Table III has only items of most importance, some of the items in Table I having been omitted. The I.Q. for all the tables is the same, and also the achievement for reading and arithmetic for the one-room group. The results of the consolidated have been multiplied by .8 because the one-room group has about .8 as long a term as the consolidated group. It is assumed that the consolidated group would learn .8 as much if the term were shortened to seven months. It will be observed in the equated tables III and IV that some of the differences are in favor of the consolidated and some in favor of the one-room group. The most important difference is that of .26 of a grade or year, for grades 5 and 6, in reading. On the assumption of 176 days of school in the year, the consolidated group is about 46 days ahead in reading. The arithmetic is about equal. Other differences are also negligible.

TABLE III

THEORETICAL RESULTS OF STANDARDIZED TESTS, GRADES FIVE AND SIX
(Equated In Time)

	I.Q.		Reading		Arithmetic	
	Consolidated	One-Room	Consolidated	One-Room	Consolidated	One-Room
Q 3	101.6	80.25	4.71	4.9	5.88	5.73
Difference	21.35			.19	.15	
M	97.25	73.75	4.15	4.06	5.04	5.08
Difference	23.5		.09			.04
Q 1	83.75	65.25	3.99	3.65	4.16	4.35
Difference	18.5		.34			.19
Aggregate Grades			272.4	257.2	362.2	351.2
Difference			15.2		47.	
Average Grades			4.26	4.0	5.09	5.08
Difference			.26		.01	

TABLE IV
 THEORETICAL RESULTS OF STANDARDIZED TESTS, GRADES SEVEN AND EIGHT
 (Equated In Time)

	I.Q.		Reading		Arithmetic	
	Consolidated	One-Room	Consolidated	One-Room	Consolidated	One-Room
Q 3	107.5	84.5	5.96	6.08	7.88	7.87
Difference	23.			.12	.01	
M	93.	72.25	4.98	5.2	6.64	6.64
Difference	17.75			.22		
Q 1	83.12	69.25	4.02	4.56	5.00	5.85
Difference	13.87			.54		.85
Aggregate Grades			191.12	209.8	247.44	260.4
Difference				18.6		12.96
Average Grades			5.02	5.52	6.51	6.85
Difference				.5		.34

It is highly probable that much of this apparent difference in I.Q. was achievement instead of native ability. According to the achievement test in reading, the consolidated group made higher grades than the one-room group. The seventy-five questions had first to be read before being answered, and it appears that this had something to do with the answers given. There is no definite way of knowing just how much this reading or other achievement may have affected the results of the I.Q. test.

Figure 1 is a graph showing the relative difference in the aggregate ages above six years of age. The aggregate years up to six were omitted on the assumption that the pupils in each group entered school at six years of age. Figure 1, therefore, represents a comparison of 365 years for the consolidated and 430 years for the one-room group, grades 5 and 6.

Figure 2 shows the relative aggregate ages of grades 7 and 8. The figure, therefore, represents 300 years for the consolidated group and 347 years for the one-room group. In matter of actual chronological ages, then, it will be noted that the one-room pupils are older than the consolidated group.

Figures 3 and 4 are the same for the one-room group as figures 1 and 2. The years in figures 1 and 2 for the consolidated group have been divided by .8 to obtain the equated years for figures 3 and 4, for the consolidated group.

The assumption was made that the number of years obtained is the probable number of years it would have required the consolidated group if the term were .8 as long as at present. In figures 3 and 4 it will be noted that the equated chronological ages are in favor of the one-room group.

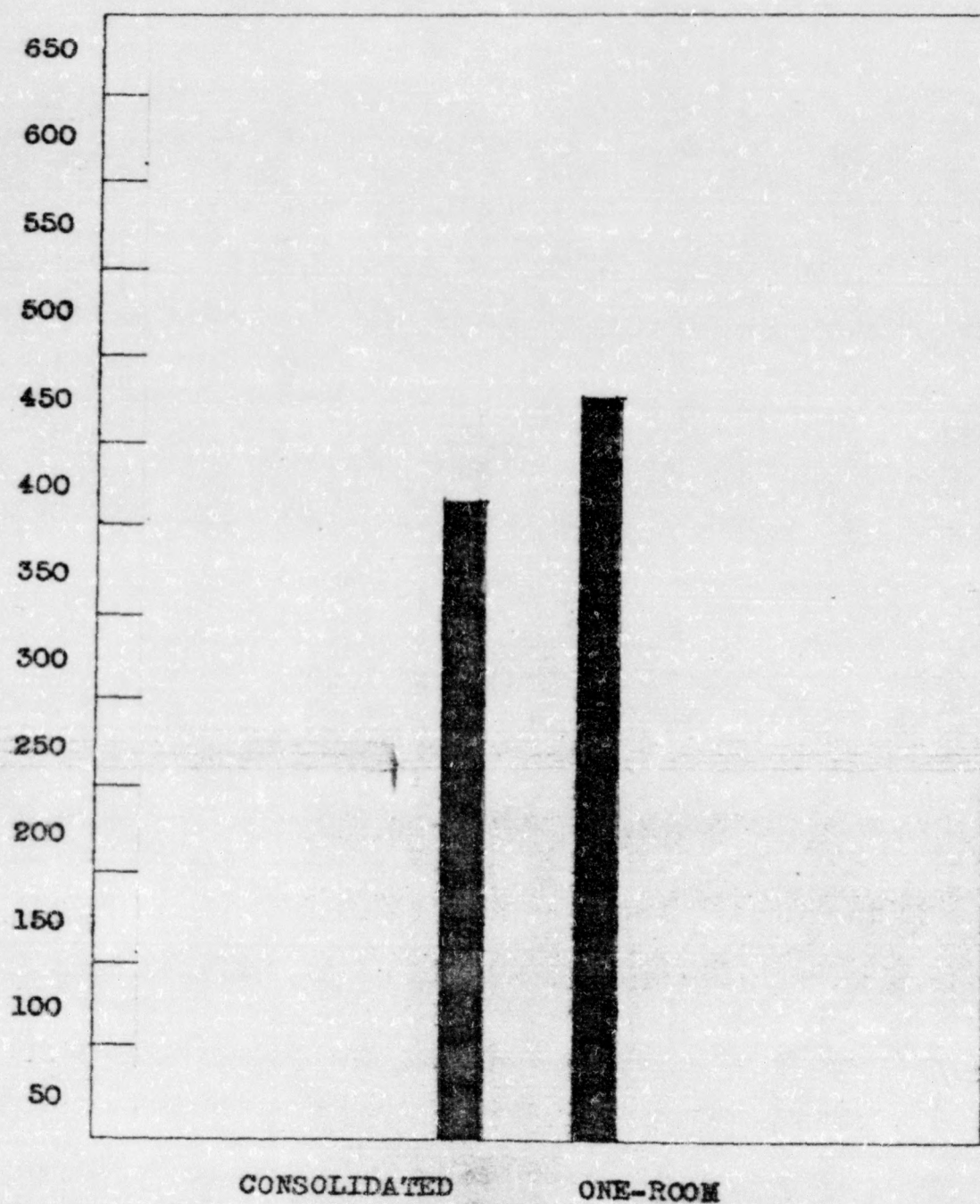


FIGURE 1. -- COMPARISON OF CHRONOLOGICAL AGES, GRADES FIVE AND SIX

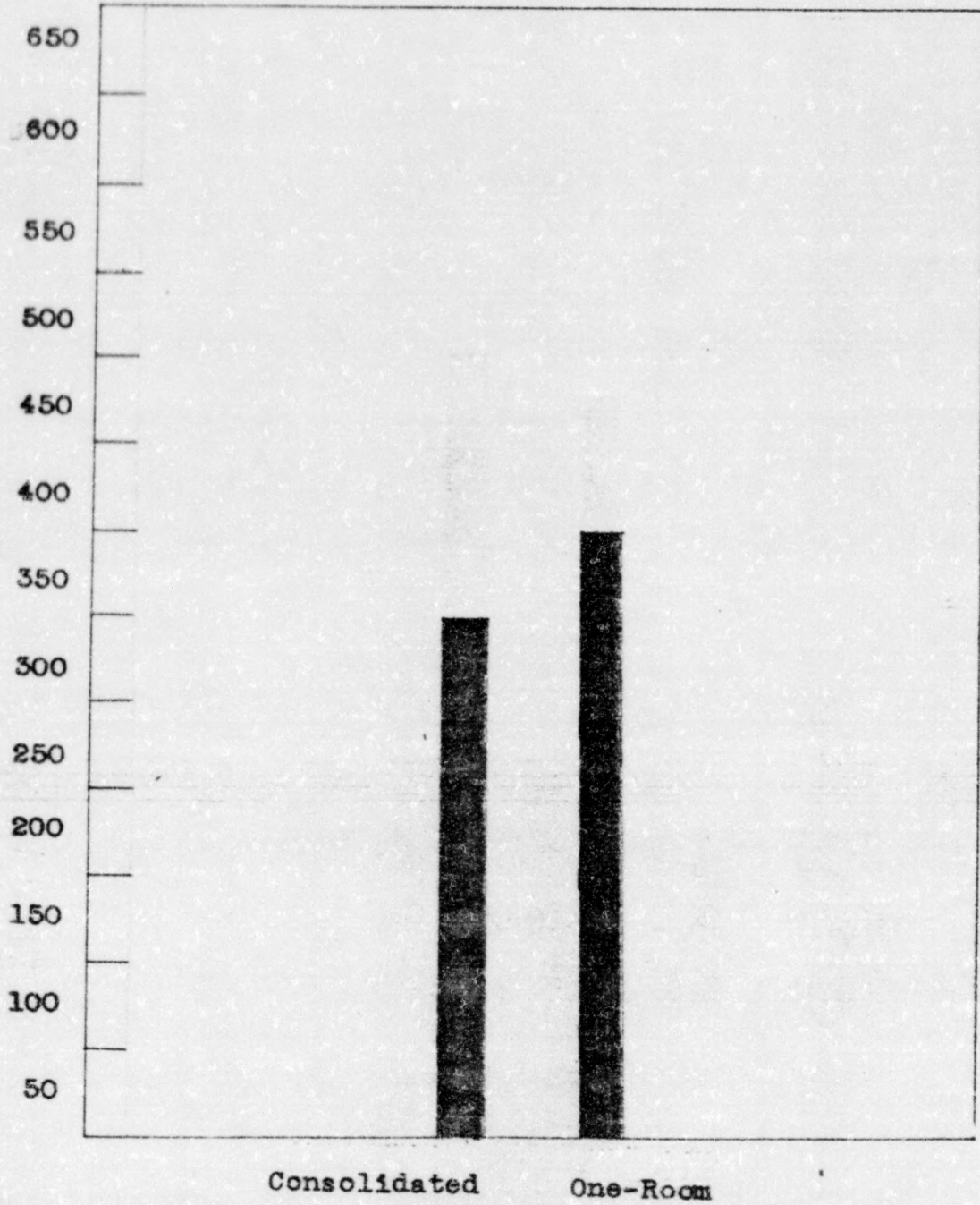


FIGURE 2. - COMPARISON OF CHRONOLOGICAL AGES, GRADES SEVEN ANDEIGHT

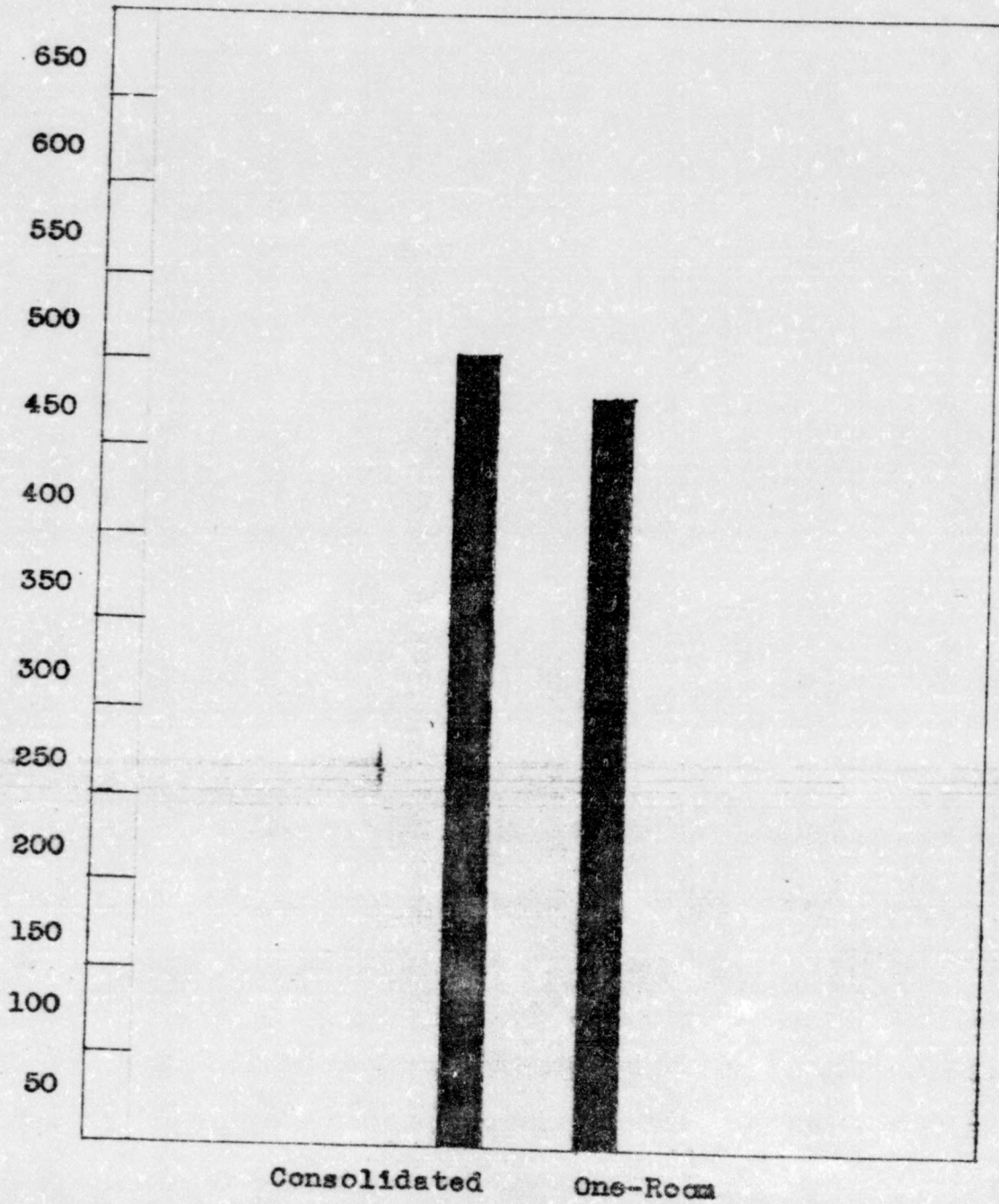


FIGURE 3.- THEORETICAL COMPARISON OF AGES, GRADES FIVE AND SIX

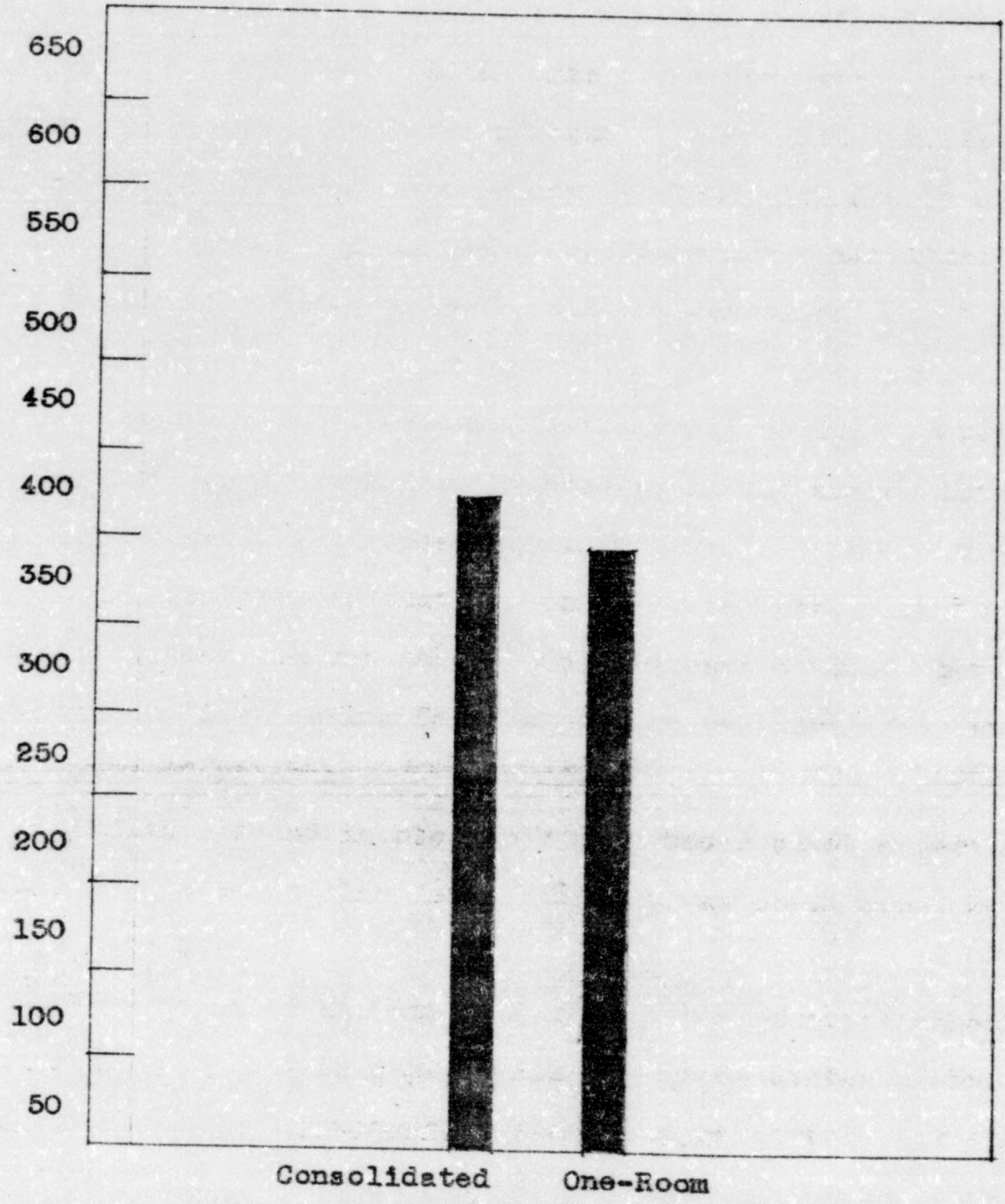


FIGURE 4.-- THEORETICAL COMPARISON OF AGES, GRADES SEVEN AND EIGHT

CHAPTER IV

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary -- ¹ In 1853 the first law authorizing consolidation of schools was passed. After this other laws were enacted, and gradually larger schools were found in the various parts of the country. Today some sections may be found with nearly all consolidated schools. Then there are other large territories that are level and have good roads, but few consolidations.

Much money has been spent in the consolidation of schools. According to Abel, ² the consolidations of the United States are much above the average for the country in the amount invested in school property. It appears that until rather recent times it was taken for granted that the consolidated school was much more efficient than the one-room school. Recent studies, however, revealed many interesting facts as to the relative efficiency of the two types of schools.

³ Huffaker found in his study that under equal supervision the small school in scholastic achievement was about equal to the large school.

⁴ Kyte found in his study of the status of rural schools, among other things, that in general the age grade status of the rural school child who continues in school is relatively the same as

¹ Op.cit. , p. 1.

² Op.cit. , p. 11.

³ Op.cit. , p. 3.

⁴ Op.cit. , p. 5.

that of the child who is in the city school. A committee of
Foote, Allan, Cooper, Hanifan, and Staker⁵ made an extensive
study in nineteen states on the type of instruction in consoli-
dated and one-teacher schools. At the end of the study they
raised the question: Why is there so small a difference in the
results of instruction between the two types of schools?

It was pointed out in the present study that the actual
scores were generally higher in the consolidated schools. Ref-
erence was also made to the fact that the consolidated group had
the advantage in length of term and native intelligence.

CONCLUSIONS — In the making of this study the author was
confronted with the same problems that confront all similar stud-
ies, namely:

1. Lack of a measure in the form of a test that will
measure all the worthwhile things that may be
acquired in school.
2. The difficulty of selecting the factors to be stud-
ied without outside factors influencing the results
obtained.

It is generally agreed at present that we have very effici-
ent objective tests by which we can measure rather accurately the
subjects generally known as the scholastic studies. On the other
hand, there are a number of things which we discuss and approve
as being highly worthwhile, but at present we have little or no

5

Op.cit. , p. 6.

adequate means of measurement, for example: initiative, honesty, practical judgment, advantage gained by wide experience, etc.

Then we are able to measure only part of the worthwhile things that are acquired in school and guess at or ignore the others. It is, then, the writer's personal opinion that many of the desirable, unmeasurable things may exist to some extent in the larger schools. However, measured solely on scholastic achievement, the consolidated school is only a little better than the one-room school.

RECOMMENDATIONS — In almost all cases where studies have been made the consolidated schools have achieved equal to or a little ahead of the one-room schools. Since this is true, it appears that where roads, density of population, and other factors are favorable, consolidation is perhaps advisable. It appears, however, that consolidation alone does not solve all the problems but is only one of the many factors in obtaining good schools. Where roads are poor, the community hilly, or the population sparse, consolidation is very questionable. We are not recommending that the schools in Russell County, where this study was made, or other similar counties be consolidated over the entire county. As roads are constructed and wealth accumulates, then consolidation may be more advisable. Perhaps there will be isolated sections that never should be consolidated.

LIMITATIONS TO THE STUDY — It is duly recognized that there are many limitations to this study:

1. The findings may be caused by local conditions or chance

combinations.

2. The 202 students used in the study were too small a number to reach a definite conclusion.
3. An attempt was made to account for higher grades by the consolidated group by pointing out the difference in I.Q. and longer term, but other factors may have been present.
4. Some of the one-room group may have attended larger schools at some time, and some of the consolidated group may have attended one-room schools at some time.

Recommendation for Other Studies

1. It is recommended that similar studies be made in other school systems.
2. Larger numbers of pupils should be studied.
3. The entire school history of each pupil should, if possible, be studied.
4. Study as far as possible all the factors that may cause progress or retardation.
5. A study should be made in a system where the length of term is the same for consolidated and one-room schools.

CHAPTER V
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