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A STUDY OF SCHOOL CONSOLIDATION IN VIRGINIA

by

Robin H. Owen

SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS

OF THE

COLLEGE OF WILLIAM AND MARY

FOR THE DEGREE

MASTER OF ARTS

1935

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Chapter I

THE PROBLEM AND ITS LITERATURE

The industrial life of the rural communities in the United States has been undergoing many changes. Two or three decades ago the prevailing practice among the farming class was to put into cultivation as large a percent of land as possible, irrespective of its suitability to the various crops planted. Today, more stress is placed upon land classification and upon the cultivation of the type of soil best suited for a particular crop. Land found to be unprofitable for cultivation is fenced for pasture and grazing, and, in many instances, it is allowed to grow into timber. More scientific farming has brought about a decrease of acreage and at the same time an increase in yield. In 1860 the average size of a farm in Virginia and West Virginia was 336 acres. (1) Today in these same states the average farm consists of only 98 acres. With the decrease of acreage, with the increasing use of machinery, and with the application of scientific knowledge to farming, there has been a relative increase in the quality and quantity of farm products. Correspondingly, it has

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(1) Garnett, William Edward, and Seymour, Aja Clee, Virginia Agricultural Experimental Station, Blacksburg, Virginia, August 1933. Bulletin 291, page 38.

resulted in a smaller proportion of labor being employed in the pursuit of agriculture. Indeed, this increasingly rapid development of mechanical and technical knowledge has revolutionized the economic life in rural communities.

Along with the industrial and mechanical changes there have been significant and obvious social changes among the rural people. Labor saving devices have afforded the farmer more leisure time in which to read and to improve himself; the free delivery of mail, the automobile, and the telephone have placed him in closer touch with the outside world; the radio has enabled him to "listen in" on what is going on and has made him a citizen of the world.

Changes effected in farm life are significant, because agriculture is considered the largest national industry. (2)

Agriculture is by far the largest national industry. In the number of its employees it exceeds the combined employees of the next five largest industries---construction work, railroads, textile, machinery, and coal. In the value of investment, agriculture again exceeds the combined total of the five next largest industries---railroads, oil, electricity, lumber, iron and steel. The management and protection of this great investment is not merely a rural problem, but a national problem as well. Agriculture is more than an important national industry; it is the basic industry---the one undertaking essential to the very existence of all other industries.

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(2) Research Bulletin, National Education Association, Vol. IX, No. 4, September, 1931, p. 235.

Business prosperity is dependent upon agricultural prosperity. In turn, agricultural prosperity is dependent upon good farming, good homes, and good schools. These go hand in hand and are mutually dependent upon one another; however, it hardly could be denied that the one best able to bring about a betterment of the other two is good schools. Since good farms, good homes, and good schools are so intimately related, any change in one would naturally involve a corresponding change in the other two; therefore, it is incumbent upon all who are interested in agricultural life to concern themselves with bettering these agencies.

Under the conditions ordinarily found in the open country and in small village communities the one important agency for child welfare is the school. It is through this agency that the health and protection of childhood is best achieved. In the absence of social and charitable agencies, health clinics, hospitals, and, in some instances, even the most essential medical services, the school must and does assume an exceptionally heavy responsibility. Quite obviously the service it extends is tremendous and far-reaching, affecting not only the child but also the adult.

Rural Education

Rural education represents about one third of

the nation's total educational task. The following authoritative statement shows somewhat this enormous undertaking: (3)

About nine million farm children are enrolled in public, elementary, and secondary schools in the United States. This means that one school child in every three comes from the farm.

There are about one hundred fifty thousand one-room school houses in use in the United States. This means that about three-fifths of all public school buildings are of the familiar one-room "little-red" type. In addition, many farm children are enrolled in the nation's eighteen thousand consolidated schools and twenty thousand two-room schools.

Approximately two hundred thousand teachers are working in one-room or two-room rural schools. These teachers constitute nearly one-third of the nation's army of 640,000 elementary public school teachers. Likewise, among the two hundred thousand high school teachers, about 75,000 are employed in small rural and village high schools.

The above facts reveal in a measure the significant part that rural education plays in our national program of education. The figures are large; however, mere figures cannot show the service that rural education renders the child, the adult, the community, and rural society in general. It is true that improvement of machinery, new methods of farming, cooperative marketing, and proper soil fertilization have received much attention in recent years. It is likewise true that agricultural experiment stations and scientific farming supervisors have rendered inestimable aid to the farmer; yet, the education of his children present a very baffling problem and a continuing challenge to his well-being.

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(3) Research Bulletin, National Education Association, Vol. IX, No. 4, 1931, p. 234.

One of the methods that society has evolved for meeting the educational problems resulting from the changes in rural life is school consolidation. Practically all studies reveal the fact that too small units are tremendously expensive and at the same time educationally ineffective. In small districts there is no satisfactory way of distributing school funds; consequently, there is a decided difference in educational opportunities for the children among various districts. This inequality in educational opportunities is undemocratic, and its remedy calls for combining the small districts and setting up a plan of consolidation for instruction, supervision, and administration.

Consolidation of Schools is a Federal Policy

For the purpose of improvement of rural education, the Federal Government through its United States Bureau of Education has secured data on the various phases of consolidation; such as, size of administrative units, transportation of pupils, effect of consolidation on enrollment, salaries and training of teachers, length of school term, and educational achievements in large and small rural schools. These investigations show that the administrative units in rural communities are small, and that there is a decided need of reorganization and enlargement of such units. The Federal Government, through studies, reports, and investigations, has advanced the policy of consolidation. A

brief review of the literature on this subject reveals the fact that consolidation has become an established policy for the advancement of rural education.

The second national conference on consolidation of rural schools was called by the United States Commission of Education, meeting in Cleveland, Ohio, in 1923. The persons composing this group were state commissions of education, county superintendents, college professors, and certain rural school workers. Three major items were discussed at this conference: (4)

1. How shall we train administrators and teachers for consolidated schools?

2. How shall we determine what constitutes an adequate unit of support and a reasonable unit of territory for a consolidated school?

3. How shall we arrive at a uniform terminology, or, at least, at a general understanding of terms used in a study of centralization in the states?

Again, the policy of consolidation is expressed in the following statement: (5)

> Probably the most significant growth in the direction of reorganization offering the possibility of improvement in school achievement and quality of instruction given during the biennium came through the consolidation movement.

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(4) Abel, J.F. Consolidation and Transportation Problems. United States Bureau of Education. Bulletin, No. 39, 1923.
(5) Cook, Katherine L. Progress of Rural Education in 1925 and 1926. United States Bureau of Education. Bulletin, No. 13, 1927. p. 44.

Research Studies on School Consolidation

In order to show the trend of consolidation, Blose (6) made a study of the number of buildings, the number of one-room schools, the total teaching positions, the percentage of teachers in one-room schools, the number of consolidations, and the extent and cost of pupil transportation in the various states. A condensed summary of this statistical information is given below:

The total number of school buildings in 1930 was 247,119, which is 7,441 less than for the year 1928. In 1916 there were 281,524 school buildings reported by the various states. This is 34,405 more than reported in 1930. Although many new buildings have been built, the average net decrease has been 2,150 a year during the past sixteen years.

The total number of one-room schools in 1930 was 148,711. In 1918, when one-room school house statistics were first collected, there were 195,000 one-room schools reported. This gives a difference of 46,689 or an annual average net decrease of 3,335.

Omitting the 2,599 teachers in the District of Columbia, there were 839,870 teaching positions in the United States during the year 1929-30. There were 631,757 teaching positions in the United States during the year 1917-18.

There were 16,232 consolidated schools reported by forty-four states. Twenty-three states reported 1,014 new consolidations during the year 1929-30.

There were 1,902,826 pupils transported at public expense during the year 1929-30 in forty-four states. The thirty-six states that reported the number of pupils transported both during 1927-28 and 1929-30 show a gain of 327,089 pupils transported, or a percentage gain of twenty-six for the biennium.

The total expended for pupil transportation in the forty-eight states amounted to $54,823,143 in 1929-30. Forty-five of these states reported an expenditure of $39,952,902 during the year 1927-28. During the year of 1929-30 the same forty-five states spent $49,131,417, or a gain of twenty-three percent in

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(6) Blose, David T. Consolidation of Schools and Transportation of Pupils. United States Bureau of Education, 1929-30.

money expended. The average cost per pupil for transportation in states reporting both number of pupils transported and cost of transportation was $28.12 during the year 1927-28 and $27.14 for the year 1929-30, or a decrease of ninety-eight cents, or 3.5 per cent per pupil transported.

From these figures we can see that the number of one-room schools has greatly decreased and at the same time the number of consolidated schools has greatly increased. The number of pupils transported is possibly the most significant fact shown. In fact, all these items are exceedingly significant because they deal with the enlargement of school units, and it is believed that the enlargement of such units means an improvement of school conditions.

It is difficult to collect comparative data on consolidated schools due to the fact that the term has different meanings in different states. Some states define consolidation by law, other states ignore the term entirely, and its application depends upon a district's size rather than upon its formation.

Great variability is found to exist among consolidated schools. This fact is distinctly noticeable in Abel's (7) study of 260 typical consolidations reported in 1924. This study shows the following facts:

The middle fifty per cent of these consolidations varied approximately as follows:

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(7) Abel, J.F. A Study of Two Hundred Sixty-four Consolidations. United States Bureau of Education. Bulletin, No. 32, 1924.

Area included in consolidation, 25 to 69 miles
Taxable property in consolidated area, $750,000 to $2,500,000
Cost per pupil enrolled, $55 to $110
Value of school property, $30,000 to $100,000
Average daily elementary school attendance, 120 to 270
Number of teachers in elementary grades, 2 to 10
Average one-way distance of transportation furnished, 3.5 to 7 miles.

It should be remembered that the above figures exclude all extreme variations in the upper and lower quartiles of the 260 consolidations; furthermore, since the consolidations included in the study were classed as "typical" by their state Department of Education, the great diversity of the consolidated schools is evident.

In the absence of certain facts, it is impossible to measure the progress made by students in the consolidated and non-consolidated schools; however, the items listed in the table below, which offer comparison, favor the consolidated schools.

This table represents comparisons of schools in eight states located in various parts of the United States. The results shown in reading achievements represented fifty-one schools, thirty-nine large rural schools and twelve small rural schools. In the arithmetic comparison eighty-three schools were represented, seventy large rural schools and nine small rural schools. Thirty-one schools were compared in spelling, twenty-five were of the large rural type and six of the small

rural type. (8)

Table showing the per cent of comparison in which children from large and small rural schools showed superior ability in achievement in reading, aritimetic, and spelling.

Per cent of comparison in which children from large rural schools showed superior ability	Subject achievement in reading	Subject achievement in arithmetic	Subject achievement in spelling
	76.5	89	81
Per cent of comparison in which children from small rural schools showed superior ability	23.52	11	19

From the data presented in the above table, it is evident that the pupils trained in large consolidated schools are doing a much better type of work in the subjects measured than the pupils trained in small rural schools. The school authorities are generally agreed that the low standing of small rural schools is not solely confined to subjects taught.* The children in these schools are placed at a disadvantage in respect to many other factors; namely, inadequate library facilities and laboratory equipment, limited extra curricula activities, and limited opportunities

(8) Covert, Timon. Educational Achievement of One-teacher and of Larger Rural Schools. United States Bureau of Education. Bulletin, No. 16, 1928.

for cooperative work with other students.

The effect of school attendance is noted in two townships in Ohio. One had centralized schools, the other had non-centralized schools, and both townships were about equally distant from any city. The study embraced a period of six years. During this period the enrollment in the non-centralized schools decreased approximately 17 per cent. In the centralized schools the enrollment increased 24 per cent. (9)

Facts presented in recent surveys in the United States indicate a movement in favor of decreasing the number of the one-teacher schools, and increasing the number of large rural schools. From 1920 to 1926, there has been a decrease from 189,000 one-teacher schools to 161,000, an average yearly decrease of 1,000. About 30,000 small rural schools have closed since 1920, and 6,000 large high schools have been established in their places. (10) The movement in favor of larger schools has not been confined to any one section. To combine schools wherever it is possible, provided conditions are all all feasible, is an accepted policy. Of course, to attempt consoli-

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(9) School Consolidation and Rural Life. United States Bureau of Education. Rural School Leaflet, No. 1, February 1922.
(10) Covert, Timon. Educational Achievements of One-teacher and of Larger Rural Schools. United States Bureau of Education. Bulletin, No. 15, 1923.

dation in isolated places and in sparsely settled communities may not be practical. However, in most instances, with the advantage of good roads and the public trend in the direction of consolidation, it is believed that the one and two-teacher schools have outlived their usefulness and that they should be replaced with better teachers and better buildings in more centralized places.

Consolidation of Schools is a State Program

For some time there has been a growing sentiment that the educational units have been too small. Various states have made surveys, and enacted laws which have enlarged the units through consolidation. In our own state some form of legislation has been proposed at each session of the General Assembly looking towards a study of conditions with a view of re-organization and enlargement of its administrative units. So strong has been this feeling that it found expression in an Education Commission appointed in 1918 for such a study.

The report of this Commission revealed the fact that Virginia had done very little along the lines of consolidation. Following the publication of this report, we find that Virginia adopted a consolidation program which represented the best thought and practice of rural education in the United States. In 1920 this Commission made the following recommendations to the

General Assembly. (11)

1. That the State Board of Education call for an investigation and a report by each division superintendent, that report to include: (a) a school map of the county showing the location and type of each school, distances between schools, etc.; (b) such statistics concerning size of school, length of term, types of buildings, etc. as would assist in determining the possibilities of school consolidation; (c) recommendations concerning possible school consolidation.

2. That a member of the State Department of Education be detailed to assist county boards and division superintendents in securing school consolidations.

3. That for administrative purposes, the district system be abandoned and that the county be made the unit for school administration and organization. (cf. Chapter XIX)

4. That the State adopt a policy of liberal State aid for the free transportation of children to consolidated schools.

5. That instruction in one-room schools be limited to grades one to five inclusive.

A knowledge of the background of any movement which calls for a change in its policy is significant. It is important, therefore, that we know the conditions

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(11) Virginia Education Survey Commission, Virginia Public Schools. Everett Waddy Company, Richmond, Virginia, 1919, p. 223.

in Virginia prior to the time of this reorganization program in order to understand its effect. The facts revealed by the Education Commission in 1918 are noteworthy: (12)

> Virginia is at present a state primarily of small one-room and two-room schools. Of approximately sixty-five hundred non-city schools, more than two-thirds are one-room schools, more than one-sixth are two-room schools, and less than one-sixth have three or more rooms each. Of all schools in the state (including these in cities) more than four-fifths are one-room or two-rooms rural schools, enrolling forty-four per cent of all white pupils. It is obvious that one of the greatest problems for education in Virginia is that created by the large number of one-room or two-room schools.

In addition to the elementary problems just described, the high schools presented an unwholesome situation. The high schools were so numerous that they were classified according to grades, namely: first grade high school, second grade high school, and third grade high school. This fact is evidenced by the following report: (13)

> In 1917-19 Virginia had one non-city high school of sort for every twenty-nine high school pupils enrolled. In high schools of the "First Grade" the average high school enrollment was fifty-four; in those of "Second Grade", it was twenty-four; in those of the "Third Grade", it was fifteen; and in schools offering one grade of high school work, it was seven.

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(12) Virginia Education Survey Commission, Virginia Public Schools. Everett Waddy Company, Richmond, Virginia, 1919. p. 217.
(13) Ibid. p. 227.

Summarizing present conditions, we may say that the present school organization has resulted in a situation where neither the elementary school nor the high school can perform its proper function.

Through the reports and recommendations of the Education Commission, Virginia became conscious of the conditions of the school system. The General Assembly in 1922 enacted laws for the most part which conformed to these recommendations. The State Board of Education carefully planned the task of setting the machinery in operation , and the division superintendents and teachers championed the campaign in the interest of such a move. A reorganization was effected in the various counties; and the districts were constructed with a view of serving the needs of the county as a whole rather than the district as a part. Aid was rendered the county out of the general fund. The lean districts profited by such a move, because better paid and better prepared teachers were employed. As a result of this movement, one readily concludes that the outcome was better instruction for the children in rural Virginia.

Since the district system has been abandoned, many counties have gone forward with the consolidation movement as fast as conditions permit. Other counties have been slow in the movement. However, in spite of these handicaps consolidated accredited high schools, located in areas best suited to accomodate the children, have

replaced many small district schools.

The task of consolidating schools has been made easier through the improvement of the road system. Good roads are being built each year through the improvement of old roads or the construction of new ones. As a result of improved transportation, the cost of consolidation will be greatly reduced, and rural education will profit accordingly. (14)

The consolidation of schools does not necessarily guarantee better educational results. One concludes, however, that patrons, having once seen the educational advantages of the large unit, will not want to return to the old system.

Purpose of the Study

For some time there has been a good deal of controversy about the size of the schools in Virginia, particularly has this been true in regard to the size of the high schools. Some people contend that the small high schools offer educational advantages that are equal to and exceed those offered by the large high schools. They base their arguments on the ground that small high schools offer an opportunity for personal touch and individual attention. Other people contend that the opportunities for social life, for extra-curricula activities, and for the grouping of students according to their

(14) Cubberly, Elwood P. State School Administration. Houghton Mifflin Company. 1927. p. 248.

abilities are more fully developed in large high schools. Furthermore, it is contended that school consolidation draws better teachers, lessens teacher turn-over, reduces failures, increases educational offerings, reduces school expenses, and increases the quantity and improves the quality of instruction.

Many communities in Virginia have consolidated their schools; others have been interested in consolidation, but are anxious to know how well claims for consolidation have been substantiated as the result of actual experience in consolidated areas. This study proposes to set forth certain existing differences between selected consolidated and non-consolidated areas in Virginia.

Statement of the Problem

This investigation attempts to determine the differences which may exist in eight non-consolidated counties and eight consolidated counties in Virginia in the following educational features:

I. Administrative Organization

- a. Number of 1, 2, 3, 4, 5 room elementary schools
- b. Number of elementary and high schools combined
- c. Length of the school term

II. Pupil Personnel

- a. School census

b. School enrollment for elementary and high school departments

c. Average daily attendance in elementary and high schools

d. Number enrolled, number failed, and percentage of failures in grades 1 to 7

e. Number of high school graduates

f. Ratio of high school graduates to high school enrollments

g. Ratio of high school enrollment to elementary school enrollment

III. Teacher Personnel

a. Number of teachers in all types of schools

b. Kinds of certificates held by elementary school teachers

c. Kinds of certificates held by high school teachers

d. Years of experience of elementary school teachers

e. Years of experience of high school teachers

f. Per cent of teacher turn-over in the elementary department

g. Per cent of teacher turn-over in the high school department

h. Number of pupils per teacher in the elementary grades

i. Teaching load in the high schools

j. Range of teaching load in the high schools

IV. Instruction

a. Subjects offered in the high schools

b. Quality of instruction in grade seven

c. Quantity of instruction in grade seven

The data for this study are for the school session 1930 and 1931, except those for instructional differences, which are based on data from the school session 1931-1932.

Chapter II

PROCEDURE AND SOURCES OF DATA

As the author pointed out in the introductory chapter, the collection of data for this study was made difficult on account of the variation in use of the term "consolidated schools." The size as well as the formation of the consolidation unit varies in different states. Consolidation is brought about in some states through legislative enactment; other states ignore the legal status and by consolidation mean simply that several schools have been united administratively. For the purpose of this study, we may define consolidation as the reorganization of a number of small rural schools in a given territory into a single unit housed in a new central building or in an enlarged existing building. Also, consolidation usually carries with it certain transportation provisions. School authorities are usually more concerned with the results they hope to obtain through consolidation than with the method by which it is brought about.

It would be unsafe to say that non-consolidation is the exact opposite of consolidation. Non-consolidated schools possess little if any of the physical make-up of the consolidated schools. We may say that a non-consolidated school possesses certain characteristics,

one of which is, as the name implies, that there is either no transportation or that there is only a small per cent of pupils transported daily. Also, we usually think of a non-consolidated school as being located in a rural section. These schools are usually of the one-room and two-room type although they may occasionally have more rooms. However, such schools are rarely ever on the accredited list.

Before selecting the counties for this study certain criteria were set up to use in choosing the consolidated and non-consolidated counties. The criteria used in this study were selected after an examination of the literature in the field of consolidation and after conferences with the Director of Research of the State Department of Education, Richmond, Virginia, and with the author's thesis committee at the College of William and Mary.

In setting up the criteria two considerations were taken into account: First, the counties chosen for study should be well distributed geographically over the state. Second, all counties chosen should possess the requisites of consolidation, topographically and financially.

The other criteria chosen for the selection of the consolidated and non-consolidated counties follow:

Non-consolidated	Consolidated
1. Many one-teacher schools	1. No or few one-teacher schools
2. 80% or more teachers in one, two, and three-room schools	2. 20% or less teachers in one, two, and three-room schools
3. Transport 25% or less of pupils in average daily attendance	3. Transport 75% or more of pupils in average daily attendance

In order to secure certain information basic to choosing the counties for study, two types of conditions were studied, one geographical, the other educational.

In ascertaining certain geographical conditions in the counties, such as good roads, total area, mountain barriers, the author used geographical and road maps issued by the State Highway Department, Richmond, Virginia, which showed the present and to a certain extent the future road conditions. Bulletins published by the State Department of Agriculture, Blacksburg, Virginia, were used extensively.

Facts concerning the educational conditions of the counties, such as number and size of schools, school census and enrollment, were obtained largely from the records of the State Department of Education and the office of the State Tax Economist, Richmond, Virginia. The offices of the State Department of Education provided all the information pertaining to the school systems of the several counties. The office of the

State Tax Economist showed the taxable wealth back of each child of school age in the various counties of the state.

After a study of the geographical and educational conditions in all counties in Virginia, thirty-one counties showed the possibilities of measuring up to the criteria chosen for selecting the counties for study.

After choosing thirty-one counties, the author held a conference with a member of the State Department of Education, Richmond, Virginia to ascertain his judgment as to those counties most nearly satisfying the criteria used. As a result of this conference, twenty counties were selected from the thirty-one; then after a conference with the Dean of the College of William and Mary and the chairman of the thesis committee, the number was further reduced to sixteen, the final number selected for study. The counties finally chosen were:

Non-consolidated	Consolidated
Patrick	Prince George
Shenandoah	Prince Edward
Wythe	Princess Anne
Frederick	Southampton
Washington	Hanover
Montgomery	Dinwiddie
Halifax	Henrico
Louisa	Jansemond

Sources of Data

The data for this study were secured from the following six chief sources:

I. The annual reports of the State Superintendent of Public Instruction and of the Division Superintendents' for 1930-31. From these reports the following information was obtained for each county:

1. Number of elementary and high schools combined
2. Number of one-room, two-room, and three-room schools
3. Length of school terms
4. High school enrollment
5. High school average daily attendance
6. Number of high school graduates
7. Number of teachers in high schools
8. Range and teaching load in high schools and elementary schools
9. Subjects offered in high schools and elementary schools

II. From the State Department of Education, Office of Supervisor of Elementary Education, the following information on the elementary schools was secured:

1. Enrollment
2. Average daily attendance
3. Number of "other elementary schools" (unconsolidated one, two, and three-room schools)

III. From the State Department of Education, Office of Certification of Teachers, the following information

was secured:

1. Certificates held by teachers
2. Years of experience of elementary and high school teachers
3. Per cent of teacher turnover in elementary and high schools

IV. From the State Department of Education, Office of the State Director of Research, was secured the results of the Otis Classification Test used in some of the counties studied.

V. From the State Department of Education, Office of State Auditor, the School Census was secured.

VI. Questionnaires were sent by the author to the Division Superintendents of counties embraced in this study to ascertain information not available elsewhere.

These data have been further supplemented by studies in the field of consolidation, and by bulletins from the Virginia and the United States Departments of Agriculture and from the United States Bureau of Education.

The questionnaires were sent to the division superintendents to check certain information obtained from the State Department of Education and to obtain additional information that could not be found in the offices of this department. A letter was addressed to each of the Division Superintendents whose counties were embraced in the study. A copy of the letter and the questionnaire will be found in the Appendix.

The material on this study is arranged under the headings of three school departments. This was done because all the available information was organized under these departments.

1. The school maintaining two departments in one building:
   a. The elementary department
   b. The secondary department
2. "Other elementary schools"

Note: The "other elementary schools" are those of the one-room, two-room, and three-room type of school that has never been consolidated. About 80 per cent of these "other elementary schools" do not have over three rooms.

Chapter III

ADMINISTRATIVE ORGANIZATION

Number of Schools

The effectiveness of the organization and administration of any school system is influenced by its buildings, grounds, and equipment. Inadequate buildings improperly equipped and poorly arranged classrooms are considered detrimental to accomplishing satisfactory work. The data compiled in the two groups of counties do not take into account such items as the structure of the building, the amount of ground alloted to it, and the equipment contained in the building. This study considers only the size and number of buildings and classrooms.

Table I shows the total number of all schools in the non-consolidated and consolidated counties. In this table is also shown the total number of elementary and high schools combined, and the total number of schools of each room size.

Table 1. Showing the total number of all schools, the number of elementary and high schools combined, and the number of rooms in the elementary schools.

Non-Consolidated Counties	Total number of schools	Number of elementary and high schools in one building	Number of rooms in elementary schools					
			1	2	3	4	5-9	10-13
Patrick	84	5	44	29	3	3		
Shenandoah	69	9	42	13	5			
Wythe	60	4	37	14	1	4		
Frederick	47	3	35	8	1			
Washington	86	12	48	18	5	3		
Montgomery	55	4	42	5	4			
Halifax	69	9	37	17	5	1		
Louisa	35	4	26	3	2			
Total	505	50	311	107	26	11		
Consolidated Counties								
Prince George	6	3					2	1
Prince Edward	6	6						
Princess Anne	8	3			3	1	1	
Southampton	12	7		3	1	1		
Hanover	13	6			3	3	1	
Dinwiddie	11	4	1	2	2		1	1
Henrico	17	5	2	2	1	3	4	
Nansemond	10	4		2	2	1	1	
Total	83	38	3	9	12	9	10	2

In the non-consolidated counties there is a total of 505 schools. Of that number, 60, or a little more than 9 per cent, represent elementary and high schools combined. In the consolidated counties there is a total of 83 schools. Of that number, 38, or a little more than 45 per cent, represent elementary and high schools combined.

In the non-consolidated counties there are 444 one, two, and three-room schools, 88 per cent of all schools being of this type. In the consolidated counties there are 24 one, two, and three-room schools, or about 29 per cent of all schools are of this type.

It is interesting to compare the number of one, two, three, and four-room schools, separately, as well as to compare the per cent of each of these to the total number of schools in the non-consolidated and consolidated counties.

In the non-consolidated counties there are 311 one-room schools, which is 61 per cent of the total number of schools. In the consolidated counties there are 3 one-room schools, about 3 per cent of the total number of schools. There are 107 two-room schools or 21 per cent of all schools in the non-consolidated counties belong to this group; whereas, in the consolidated counties there are but 9 two-room schools, which is 10 per cent of all schools. In the non-consolidated counties there are 26 three-room schools, these being 5 per cent of all schools

in this group. In the consolidated counties within a like group, there are 12 three-room schools, which is 14 per cent of the total schools in this group. In the four-room group of the non-consolidated counties, there are 11 schools, this being 2 per cent of the total number of schools; while in the consolidated counties there are 9 schools of this type, or 10 per cent of the total number of schools. There are no other schools beyond those of the one, two, three, four-room type in the non-consolidated counties; however, there are schools in the consolidated counties ranging from five through thirteen rooms.

The differences in the size of schools that exist in the two groups of counties are quite noticeable. In the non-consolidated group of counties there is a total of 505 schools; whereas, in the consolidated group of counties there is a total of 83, a difference of 422 schools. There are 50 elementary and high schools combined in one building in the non-consolidated counties and only 38 in the consolidated counties, a difference of 12. These differences are significant. A further condition existing in the two groups of counties, as was pointed out in the discussion, is the fact that there were in the non-consolidated counties 444 one, two, and three-room schools, 88 per cent being of this type.

In the consolidated counties 24 schools or 29 per cent of all schools are of the one, two, and three-room

type. The consolidated counties run larger schools and contain far fewer real small schools than the non-consolidated counties.

Length of Term

The number of days a school is in session is one measure of its efficiency. The length of the school term may be taken as an index of educational opportunities. This measure is frequently used to determine the relative status of two schools or of two school systems. We constantly find the length of school term employed in comparing rural and urban schools as well as in comparing the educational opportunities of smaller and larger rural schools.

The differences in school terms affect the differences in salaries received by teachers. This fact is forcibly called to our attention when we compare the length of school term of rural and city schools and the salaries of rural and city teachers. One of the means in bringing about equitable opportunities between the rural and the city child is through the increase of the rural school term. So long as there is a marked difference in salaries of city and rural school teachers and in the length of school term there will continue to be a marked difference in educational opportunities. We can safely say that the elements of weakness and strength in a school system are

to a certain extent determined by the length of its term.

Table 2 shows the length of the school terms in days for all of the elementary and high schools combined and for all other schools in the two groups of counties.

Table 2. Showing the length of school term in the elementary and high schools of each county.

Non-Consolidated Counties	Number of elementary and high schools combined	Elementary department	High school department	Number of "other elementary schools"	Days in session
		Days in session			
Patrick	5	180	180	1 67	180 160
Shenandoah	9	180	180	15 46	180 160
Wythe	4	180	180	53	160
Frederick	3	160	160	3 44	140 160
Washington	12	180	180	13 66	180 160
Montgomery	4	160	180	46 1 1 1 1	160 149 140 150 140
Halifax	9	180	180	61	160
Louisa	4	180	180	31	160
Consolidated Counties					
Prince George	3	180	180	3	180
Prince Edward	6	180	180	0	
Princess Anne	3	180	180	5	180
Southampton	7	180	180	5	180
Hanover	6	180	180	7	180
Dinwiddie	4	180	180	7	180
Henrico	5	180	180	12	180
Nansemond	4	180	180	6	180

The material has been arranged in a more succinct way in table 3, which shows the number of elementary and high schools combined, the average length of term in days in the elementary and high school departments of schools having both elementary and high school departments, and the number and average length of terms in days for the "other elementary schools" in the eight non-consolidated and eight consolidated counties in Virginia during the session 1930 and 1931.

Table 3. Shewing the total number of elementary and high schools combined and the length of term as well as the total number and average length of term for all "other elementary schools."

Counties	Elementary and high schools combined			"Other elementary schools	
	Number of schools	Elementary department Average days in session	High school department	Number of schools	Average days in session
Non-Consoli-dated	50	175.0	177.5	450	158.7
Consoli-dated	38	180	180	45	180

There are 50 high schools doing elementary and high school work in the non-consolidated group of counties. In the elementary department of the school, the average length of the school term is 175.0 days per session. In the high department, the average length of the school term is 177.5 days per session. In the consolidated group of counties,

there are 33 high schools doing elementary and high school work. In the elementary department of the school, the average length of the school term is 180 days per session. The same is true in the high school department. The difference in the average length of term in the two groups of counties is relatively insignificant, there being about three days per session difference which is in favor of the consolidated group. The major difference lies in the "other elementary schools" in the counties. Invariably the greatest difference in the two groups of counties has been in this class of schools. There are 460 "other elementary schools" in the non-consolidated group of counties compared with 45 in the consolidated group. In the former case, the school term is 156.7 days; in the latter, 180 days. It will be noticed that the average length of the school term in the consolidated group of counties is 180 days, whereas, the school term in the non-consolidated group of counties varies for each type of school as well as for each department. Here is one of the conditions that consolidation proposes to improve.

Pupils enrolled in "other elementary schools" of the non-consolidated group of counties attend school a little over a month less than the pupils enrolled in like schools of the consolidated group of counties. For example, a child may enroll in one of the schools of the non-consolidated group of counties and be deprived of one month's schooling each year for seven years. At the completion of the elementary grades he will have lost approximately one

scholastic year or would have attended the elementary grades slightly more than six years instead of the prescribed seven.

Later in this study it will be seen that 19,298 or 65 per cent of the total number of children attending school in the non-consolidated counties are enrolled in the small elementary schools in those counties. If this total number of children were multiplied by the total number of days less schooling received by these children than those in the consolidated counties, we would have 411,047.4 pupil days less schooling in the elementary schools in the non-consolidated counties than in the consolidated counties. Through no fault of the child, he is given one year in seven less schooling than another child who was fortunate enough to be born in a different county.

Strange as it may seem, a short school term is commonly accompanied by more irregularity in attendance than longer terms. Ayer (1) in a study of nine counties in five states, found that 47 per cent of the children in schools offering 139-day terms were present less than 80 days while only 19 per cent of the children in schools offering 179-day terms were present less than 80 days. In brief, children having the shorter term did not even attend the school that was available as well as did the children having the

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(1) Research Bulletin, National Education Association, Vol. IX, No. 4, September 1931, pp. 252-53.

longer term.

Longer school sessions, larger school units, greater educational efficiency, and more regular school attendance are usually found together. Probably the forces which produce one of them affects them all. At any rate, a combination of these conditions is educationally desirable.

Summary

Many small schools are to be found in the non-consolidated counties. These schools for the most part are of the one, two, and three-room type. A different situation is found in the consolidated counties. About 50 per cent of all the schools are consolidated elementary and high schools combined. There are about 12 more high schools in the non-consolidated counties than there are in the consolidated counties. A rather significant picture is revealed in these two groups of counties in respect to the size of the schools. In the non-consolidated counties, the more schools there are, the greater the number of one, two, and three-room schools; whereas, in the consolidated counties, there are fewer schools with a relative increase in their size.

The length of school terms in the combined elementary and high schools is nearly the same in the two groups of counties. The schools in the consolidated counties have a few days per session more in the high and elementary

division than the schools of like division in the non-consolidated counties.

The biggest difference existing between the consolidated and non-consolidated counties is found in the length of the term of the "other elementary schools." The length of the term in the consolidated counties is 180 days, compared to the average length of term in the non-consolidated counties of 158.7 days; thereby making a difference of 21.3 days in favor of the consolidated counties.

Chapter IV

PUPIL PERSONNEL

Each community is responsible for seeing that the school population is enrolled in school. It is the joint responsibility of the parents in the community and of the school authorities to see that the pupils remain in school. If this twofold function is not discharged, the school is failing to serve the children in the community.

In order to attract and hold the children in a given area, the school must supply a broad curriculum of studies, a teaching unit large enough and a school term long enough for educational efficiency. In order to be effective a school should be organized to meet the needs of the community, and it should be able to offer something definite to every child who enters its doors. Such a school will do much toward attracting students to enroll as well as towards keeping them in school after having once enrolled.

The rural school, with its small enrollment, finds it very difficult to carry forward a successful program. Small enrollment has been one of the greatest handicaps to rural schools. Small schools, elementary and high, find it nearly impossible to provide suitable educational programs at a reasonable cost. Frequently, we find that a small teaching staff is required to teach many grades and a wide range of subjects. It has been asserted that

larger educational units have a tendency to do away with such evils. One of the claims for consolidation is that it offers a curriculum more nearly suited to the needs of the individual child and a teaching staff that will carry it our properly.

Another factor that has worked a hardship on the small school has been the short period of time these schools are open during the year.

Ayer's study of the attendance records of 72,120 rural children in ten states in 1922 showed that half of the children in rural communities were attending school less than seven and one-half months; over a fourth less than five months; and thirteen per cent less than three months. A recent sampling of rural schools in twenty-two counties of five states showed 48 per cent of the non-transported children under seven years old attending less than 151 days. Older children showed a slightly better attendance, but even among children 15 and 16 years of age, 29 per cent attended school less than 151 days. (1)

With a proper teaching situation that takes into account a school plant sufficiently large to make possible a diversified program of studies and with a competent teaching staff, the school can go a long way towards holding pupils in school.

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(1) Research Bulletin, National Education Association, Vol. IX, No. 4, September 1931, p. 251.

School Population

The school population of the eight non-consolidated and eight consolidated counties used in this study is divided into two parts. The ages 6 to 12 inclusive represent the elementary population, while the ages 13 to 16 inclusive represent the high school population. According to the population table a few pupils of the elementary age would be found in the high school division; likewise, students of high school age would be found in the elementary division.

Table 4 is arranged to show the school population by ages for the seven elementary grades as well as the population by grades for the eight non-consolidated and eight consolidated counties in Virginia during the session 1930 and 1931.

Table 4. Showing the total school population by ages in the elementary schools of the non-consolidated and consolidated counties. (Age 6 represents grade 1, age 7, grade 2, etc.)

Non-Consolidated Counties	Age 6	Age 7	Age 8	Age 9	Age 10	Age 11	Age 12
Patrick	396	617	698	585	781	432	415
Shenandoah	499	513	473	496	456	447	437
Wythe	462	643	509	462	456	471	427
Frederick	526	334	318	310	332	320	307
Washington	595	1321	855	793	813	729	798
Montgomery	460	441	417	384	424	327	443
Halifax	911	727	693	689	625	642	742
Louisa	157	225	192	187	246	217	216
Total	3806	4819	4155	3904	4131	3590	3787
Consolidated Counties							
Prince George	183	179	151	161	167	138	162
Prince Edward	141	151	171	146	165	149	185
Princess Anne	168	181	205	157	205	191	175
Southampton	237	260	276	260	270	241	272
Hanover	240	267	225	269	313	336	311
Dinwiddie	197	173	173	180	176	168	179
Henrico	719	575	571	549	576	447	449
Nansemond	153	229	200	183	198	104	190
Total	2038	2015	1972	1695	2070	1663	1903

One noticeable feature of the table is that the elementary school population of the non-consolidated counties is about twice that of the consolidated counties.

Table 5 shows the total high school population in the two groups of counties.

Table 5. Showing the high school population for the non-consolidated and the consolidated counties.

Non-Consolidated Counties	Age 13	Age 14	Age 15	Age 16
Patrick	520	432	477	401
Shenandoah	466	443	459	446
Wythe	450	431	422	413
Frederick	281	281	290	300
Washington	697	743	651	688
Montgomery	390	372	362	385
Halifax	690	718	765	709
Louisa	198	215	163	201
Total	3692	3635	3597	3543
Consolidated Counties				
Prince George	131	165	140	129
Prince Edward	143	187	140	127
Princess Anne	166	182	158	226
Southampton	256	256	223	251
Hanover	328	339	317	330
Dinwiddie	166	164	178	163
Henrico	508	435	452	468
Nansemond	167	109	151	173
Total	1865	1906	1759	1859

As with the total elementary school population, so the total high school population in the non-consolidated

counties is about twice as great as that of the consolidated counties.

Enrollment

In order to show the trend of school enrollment, and the extent to which the school population is enrolled, Table 6 is arranged. It shows the elementary enrollment of schools having elementary and high schools combined, the enrollment of the high school department, and the enrollment of "other elementary schools" in the eight non-consolidated counties and the eight consolidated counties in Virginia during the session of 1930 and 1931.

Table 6. Showing the elementary enrollment of the schools having elementary and high schools combined, the high school enrollment, and the enrollment of the "other elementary schools."

Non-Consolidated Counties	Elementary department of schools having elementary and high schools combined	High school department	"Other elementary schools"
Patrick	631	273	3301
Shenandoah	2500	875	1600
Wythe	1290	457	3144
Frederick	443	131	2118
Washington	2645	984	2680
Montgomery	1236	509	2505
Halifax	1723	992	2988
Louisa	691	279	962
Consolidated Counties			
Prince George	304	198	787
Prince Edward	924	363	not available
Princess Anne	975	430	650
Southampton	1642	693	372
Hanover	1275	564	794
Dinwiddie	754	298	699
Henrico	2012	1097	1787
Nansemond	1135	391	518

In order to collect the material in a way which will make it easier for the reader to interpret, Table 7 has been arranged to summarize Table 6 and, in addition, to show the total enrollment of each group of counties and the per cent of each division enrollment to the total enrollment.

Table 7. Showing the total enrollment, the enrollment by divisions, and the per cent of each division enrollment to the total enrollment.

Counties	Total school enrollment	Enrollment in elementary division		Enrollment in high school division		Enrollment in "other elementary schools"	
		Number	Per-cent	Number	Per-cent	Number	Per-cent
Non-Consolidated Counties	34,947	11,149	31	4500	12	19,298	55
Consolidated Counties	18,621	9,021	47	3994	21	5,606	30

Some interesting conditions are revealed by this table for the two groups of counties. Out of an enrollment of 34,947 in the non-consolidated group of counties, 11,149 or 31 per cent, are in the elementary department of schools having elementary and high schools combined. In the consolidated group of counties, the enrollment is 18,621. Of that number 9,021 or 47 per cent, are in the elementary department of schools having elementary and high schools combined were generally large accredited four-year schools.

In the non-consolidated group among schools of this type there were many one, two, and three year non-accredited schools. The schools in the consolidated counties are sufficiently large for some form of classification of its enrollment. In the consolidated counties, where 47 per cent of the enrollment composes the elementary department, we find a much better situation than we do in the non-consolidated counties where only 31 per cent of the enrollment composes the elementary department.

In comparing the high school department of the two groups of counties we again find certain significant facts. In the non-consolidated counties, the high school enrollment is 4,600 or 12 per cent of the total enrollment. In the high school department of consolidated counties, the enrollment is 3,994, or 21 per cent of the total enrollment.

Nine per cent more high school students are enrolled in the consolidated group of counties than in the non-consolidated group. One may be led to believe that the character of work done by the elementary department is reflected in the fact that more pupils enter high school from the elementary division of the consolidated group of counties than from the elementary division of the non-consolidated group of counties. Indeed, in the consolidated counties one out of every eight students is enrolled in the high school department. These pupils entered the elementary grades, completed their work, and enrolled in the high school department. Evidently conditions were proper

and conducive for them to want to continue their work. Such conditions were not present in the non-consolidated counties or these students would possibly have continued their work.

The most striking differences in the two groups of counties are found in the divisions of the "other elementary schools." The enrollment of the "other elementary schools" in the non-consolidated counties is 19,298. This enrollment exceeds the combined enrollment of the other two divisions, being in fact, 55 per cent of the total enrollment. In the consolidated counties, the enrollment of the "other elementary schools" is 5,606, or 30 per cent of the total enrollment. The per cent of enrollment in such schools is nearly twice as great in the non-consolidated counties as in the consolidated.

Dr. Inglis pointed out the evils of the one and two-room schools in his survey of 1918. (2) Since that time many counties have gone a long way in eradicating these evils through consolidation. It appears that the school system having its enrollment for the most part made up of schools of the one-room and the two-room type is not as well off as the school system which has abandoned such. One must conclude that the evidence points sharply again in favor of the consolidated counties.

Percentage of Enrollment to School Population

In order to show the ratio between the enrollment and

school population in the two groups of counties, Table 8 has been prepared. This table shows the total elementary and high school populations, the elementary population from ages 6 to 12, the high school population from ages 13 to 16, the total elementary and high school enrollment, the per cent of total elementary and high school enrollment to the total elementary and high school population, the elementary enrollment, the per cent of elementary enrollment to the elementary population, the high school enrollment and the per cent of high school enrollment to high school population in the eight non-consolidated and eight consolidated counties in Virginia during the session 1930 and 1931.

Table 8. Showing the total school population and enrollment and the percentage of enrollment to school population in the two groups of counties.

Enrollment and Population	Non-Consolidated Counties	Consolidated Counties
Total School Population Ages 6-16	42,669	21,144
Total School Enrollment Ages 6-16	31,847	18,631
Per cent of School Population Enrolled in School Ages 6-16	74%	88%
Total Elementary School Population Ages 6-12	28,192	13,765
Total Elementary School Enrollment Ages 6-12	24,342	14,637 *
Per cent Elementary School Population Enrolled Ages 6-12	86%	106% *
Total High School Population Ages 13-16	14,467	7,389
Total High School Enrollment Ages 13-16	4,800	3,994
Per cent High School Population Enrolled Ages 13-16	31%	54%

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* This figure, larger than the total population, is due to children being brought into consolidated schools but living outside the census area for that school district and other reasons explained on pages 52-53. Since the total enrollment is larger than the total population, the per cent is over 100.

Note: The enrollment for Shenandoah County was omitted from this table because reliable figures for this county were not available.

Certain significant differences are shown by a comparison of the percentage of enrollment to population in the two groups of counties. In the non-consolidated counties, the total elementary and high school population is 42,659 and the total elementary and high school enrollment is 31,847. The per cent of enrollment to population is 74. In the consolidated counties, the total elementary and high school population is 21,144, and the total elementary and high school enrollment is 18,631. The per cent of enrollment to population is 88. There is a difference of 14 per cent in favor of the consolidated group of counties. In other words, the consolidated counties have 14 per cent more children enrolled in school than have the non-consolidated counties. Continuing, we find that the elementary population in the non-consolidated counties is 28,192, and the elementary enrollment is 24,342. The per cent of the enrollment to population is 86. In the consolidated counties the elementary population is 13,765, and the elementary enrollment is 14,637. The per cent of the enrollment to population is 106. There is a difference of 20 per cent in favor of the consolidated counties. The high percentage is due to the fact that the enrollment is larger than the population. These figures were rechecked with those contained in the annual report of the Superintendent of Public Instruction, Richmond, Virginia, and they

coincide. This may be accounted for in the following ways:

First, the children living in one county and attending school in another.

Second, a transient population would have a tendency to swell the enrollment, especially is this noticeable in counties that border on large cities.

Third, irregular promotion; for example, according to the census report, a child 13 years of age would be enrolled in high school, but in actuality he might be in the fifth or sixth grade.

The high school population in the non-consolidated counties is 14,467 and the enrollment is 4,500. The per cent of high school population enrolled is 31. In the consolidated counties the high school population is 7,389 and the high school enrollment is 3,994. The per cent of high school enrollment to high school population is 54. There is a difference of 23 per cent in favor of the consolidated counties. In other words, the consolidated counties are serving nearly 50 per cent more high school students than the non-consolidated counties, a fact highly significant.

The comparisons offer very little opportunities for discussion. Statistics show that consolidation is favored over non-consolidation in every department in the above table. Consolidation gets more children in school; for example, in consolidated counties 18 per cent more chil-

dren are enrolled in the elementary and high school division, 23 per cent more pupils are enrolled in the elementary department, and about 60 per cent more pupils are enrolled in the high school division than are enrolled in the non-consolidated counties.

Average Daily Attendance

In 1918 Proctor, making a comparison of the medium sized high schools in the states of Oregon, Washington, and California, discovered that the presence of relatively large high schools was not alone due to the population, area, resources, or general interest of the community in secondary education. The difference was due primarily to the policy of administration existing in these states. (2) The fact that there are one and two-teacher schools is the fault of school authorities, and the remedy for such is to be found in combining these small elementary schools into larger centralized units, that is, consolidation.

Table 9 is arranged to show the average daily attendance based on the enrollment. This table shows the average daily attendance in the elementary department of schools combined, the average daily attendance in the high school department, and the average daily attendance in the "other

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(2) Research Bulletin, National Education Association, Volume IX, Number 4. September 1931. P. 283.

elementary schools" in the eight non-consolidated and eight consolidated counties in Virginia during the session 1930 and 1931.

Table 9. Showing the per cent of enrollment in average daily attendance in the elementary and in the high school departments of schools having elementary and high schools combined, and in the "other elementary schools".

Non-Consolidated Counties	Per cent of enrollment in average daily attendance					
	Elementary Department of schools having elementary and high schools combined		High School Department		"Other Elementary Schools"	
	Number in A.D.A.	Per cent in A.D.A.	Number in A.D.A.	Per cent in A.D.A.	Number in A.D.A.	Per cent in A.D.A.
Patrick	447.0	70.8	223.0	81.6	2129.0	64.5
Shenandoah	2400.0	96.0	800.0	91.4	1500.0	95.7
Wythe	1174.4	91.0	387.8	84.9	1857.7	59.1
Frederick	372.0	83.9	114.2	87.1	1476.9	69.7
Washington	2114.0	79.9	299.0	30.3	3100.0	119.4
Montgomery	1084.0	87.7	449.4	88.2	1999.7	79.8
Halifax	1593.0	92.4	676.0	88.5	2483.0	83.1
Louisa	568.9	83.5	250.1	86.9	842.5	56.4
Total A.D.A. and average per cent	9753.3	87.0	3399.5	75.0	15987.8	78.0
Consolidated Counties	No.	%	No.	%	No.	%
Prince George	312.0	102.8	284.0	143.4	715.0	90.8
Prince Edward	749.0	80.7	324.0	89.2	no figures	
Princess Anne	780.0	80.0	395.0	91.4	581.0	89.4
Southampton	1366.3	83.2	533.0	81.6	200.4	53.8
Hanover	1220.9	95.7	535.2	94.8	607.0	76.5
Dinwiddie	672.5	89.2	334.0	112.1	396.0	85.8
Henrico	1543.0	76.6	1117.0	102.8	670.0	37.9
Nansemond	978.0	86.1	372.0	95.1	427.0	62.4
Total and average	7620.8	84.0	3892.1	97.0	3805.4	67.0

There is not much difference in the average daily attendance in the elementary schools of the two groups of counties. In the elementary department of the non-consolidated counties the attendance is better than in the elementary department of the consolidated counties. The daily attendance in the non-consolidated counties is 87 per cent of the enrollment. The fact that the average daily attendance is better in the non-consolidated group of counties than in the consolidated group may be accounted for in three ways:

First, many small schools are located near the pupils.

Second, consolidation in elementary schools may have gone too far in some instances.

Third, busses have a difficult time in transporting pupils in bad weather.

It is not unusual for consolidation to affect average daily attendance, particularly is this true if pupils are transported. The distance pupils are transported likewise affects the attendance. (3)

The difference in the average daily attendance between the elementary department of the two groups of counties is slightly in favor of the non-consolidated counties. There is an appreciable difference in the average daily attendance in the high school department of the two groups of counties. In the non-consolidated counties, the average daily attendance is 75 per cent of the enrollment.

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(3) Research Bulletin, No. 40. Agricultural Experiment Station, Madison Wis. 1916. pp. 47-48. This was taken from E.L. Combs, Efficiency in Relation to Size of High Schools, State Board of Education, Richmond, Va. p. 78.

In the consolidated counties the average daily attendance is 97 per cent of the enrollment. There is a difference of 22 per cent in the two groups of counties, which is in favor of the consolidated schools. Evidently high school conditions are more favorable for the attendance of children in the consolidated counties than in the non-consolidated counties. It is possible that the quality of instruction and the preparation of the teachers in the non-consolidated counties is not comparable to that of the consolidated counties. "The teachers in the small rural schools are not as well prepared or as experienced as teachers in the large schools----------they are quite often required to teach in three or more fields. It is generally recognized that these factors affect the quality of instruction." (4) Many students enrolled in the high school department of the non-consolidated group of counties have only one teacher. This teacher of course has to teach all high school subjects. This fact may have something to do with the difference in the average daily attendance that exists in the high schools of the two groups of counties.

The average daily attendance in the "other elementary schools" in the two groups of counties shows a wide difference. In the non-consolidated counties the average daily attendance is 76 per cent of the enrollment. In the consolidated counties the average daily attendance is 67 per

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(4) Combs, J.L. Efficiency in Relation to the Size of High Schools. State Board of Education, Richmond, Virginia.

cent of the enrollment. There is a difference of 11 per cent in favor of the non-consolidated counties. This is accounted for very probably through the fact that small schools in the non-consolidated counties are within easy reach of the children, whereas, the schools in the consolidated counties are not so readily accessible, due to the sparsely settled communities.

Taking the counties as a whole the per cent of average daily attendance in all three school units combined is 8 per cent better in the consolidated counties than in the non-consolidated counties. An examination of the percentage of average daily attendance for each of the counties indicates in general that attendance is better in the consolidated counties than it is in the non-consolidated counties.

Pupil Progress

As a result of reports on progress of pupils in elementary grades issued by city and state school systems within the past few years, certain specific items influencing pupil progress have been discovered. Among these items are school entrance regulations, grade placement and classification of pupils, school attendance, and the adjustment of the curriculum to meet the individual needs of the pupils. Other items which are of equal importance that need further study are: systems of pupil accounting

and the relation of pupils enrolled in a class to their success in meeting grade requirements, definition of the term "promotion", and the possibilities of a flexible program.

We usually think of normal progress as meaning the progression of a child one grade a year. While this may be true for all grades taken as a whole, the conditions attached to the teaching situation should be considered. For instance, teachers in small schools frequently have more than one grade, the time devoted to each child is limited, and it is almost impossible to give attention to individual instruction. Larger schools usually afford better classification of their pupils and in most instances have but one grade to the teacher. One of the claims of consolidation is that it permits a better classification of pupils as well as the assignment of a single grade to a teacher.

To show the number of children promoted, the number failed, and the per cent failed in the elementary grades of the two groups of counties, Table 10 has been arranged. This table shows the number of pupils enrolled in each grade, the number failed, and the per cent failed in the elementary grades of the eight non-consolidated and the eight consolidated counties in Virginia during the session 1930 and 1931.

Table 10. Showing the number of pupils enrolled, the number failed, and the per cent failed in grades one to seven inclusive in the eight non-consolidated and eight consolidated counties in Virginia during the school session 1930-1931.

Non-Consolidated Counties	Grades 1			2			3			4		
Patrick	1239	482	38	500	142	28	478	139	29	418	183	43
Shenandoah	886	329	37	574	127	22	511	117	20	523	150	28
Wythe	1147	453	39	644	137	21	606	155	25	629	238	37
Frederick	720	465	64	346	114	32	350	137	39	319	155	48
Washington	2065	767	37	1019	256	26	1004	275	27	943	262	27
Montgomery	1171	603	53	513	152	29	481	130	27	531	228	42
Halifax	389	42	10	622	95	15	858	208	24	768	84	10
Louisa	335	145	43	215	52	24	222	58	26	240	71	29
Total	7982	3306		4433	1075		4510	1219		4371	1371	

Consolidated Counties	Grades 1			2			3			4		
Prince George	208	56	25	178	38	21	161	30	18	158	39	24
Prince Edward	175	84	48	152	43	28	119	18	15	125	30	24
Princess Anne	270	91	33	221	57	25	221	43	19	260	60	23
Southampton	386	140	36	331	70	21	297	54	18	335	86	25
Hanover	331	127	38	254	41	16	311	63	20	313	87	27
Dinwiddie	243	72	29	223	36	16	206	32	15	226	45	16
Henrico	741	109	14	527	41	07	542	46	08	512	74	14
Nansemond	279	112	40	247	77	31	216	48	22	222	56	25
Total	2633	791		2133	403		2075	334		2156	477	

Table 10(Continued). Showing the number of pupils enrolled, the number failed, and the per cent failed in grades one to seven inclusive in the eight non-consolidated and eight consolidated counties in Virginia during the school session 1930 - 1931.

Non Consolidated Counties	Grades 5			6			7		
Patrick	439	168	38	390	147	37	340	133	43
[illegible]	530	136	26	502	170	33	498	147	27
Wythe	477	199	41	460	197	42	316	117	37
Frederick	315	147	46	248	101	40	234	114	48
Washington	804	259	32	689	266	38	573	92	16
Montgomery	410	184	44	318	153	47	293	115	39
Halifax	910	60	26	882	91	10	697	97	14
Louisa	242	61	25	181	53	29	186	51	27
Total	4107	1212		3670	1178		3137	866	

Consolidated Counties	Grades 5			6			7		
Prince George	182	52	28	124	25	20	136	33	24
Prince Edward	133	26	19	121	28	23	103	13	12
Princess Anne	202	46	22	182	71	39	133	36	27
Southampton	285	86	30	256	73	29	219	58	26
Hanover	295	71	29	269	105	38	238	64	26
Nansemond	221	59	26	197	47	23	174	38	21
Henrico	469	81	17	427	82	19	429	71	16
Nansemond	221	59	26	197	47	23	174	38	21
Total	1998	470		1766	472		1590	354	

For the purpose of summarizing the material in Table 10, Table 11 has been made.

Table 11. Showing the average per cent of children failed in grades one to seven inclusive in the eight non-consolidated and the eight consolidated counties in Virginia during the session 1930-31.

Grades	1	2	3	4	5	6	7
Counties	Per cent failed	Per cent failed	Per cent failed	Per cent failed	Per cent failed	Per cent failed	Per cent failed
Non-Consolidated	41	24	27	31	29	32	27
Consolidated	30	18	16	22	23	26	23

Quite outstanding is the fact that every grade in the non-consolidated group of counties has a higher per cent of failures than the same grade in the consolidated group of counties. The per cent of failures as well as the difference in the per cent of the two groups of counties is as follows: In the first grade of the non-consolidated counties, 41 per cent failed as compared to 30 per cent in the consolidated, a difference of 11 per cent. In the second grade, 24 per cent failed in the non-consolidated counties as compared to 18 per cent in the consolidated counties, a difference of 6 per cent. In the third grade of the non-consolidated group of counties, 27 per cent failed as against 16 per cent in the same grade in the consolidated

group of counties, a difference of 11 per cent. In the fourth grade, 31 per cent of the pupils failed in the non-consolidated counties as against 22 per cent in the consolidated counties, a difference of 19 per cent. In the fifth grade, 29 per cent failed in the non-consolidated counties as compared to 23 per cent in the consolidated counties, a difference of 6 per cent. In the sixth grade, 32 per cent failed in the non-consolidated counties as against 26 per cent in the consolidated counties, a difference of 6 per cent. In the seventh grade of the non-consolidated counties, 27 per cent failed as compared to 23 per cent in the consolidated counties, a difference of 4 per cent.

The range of differences is from 4 to 11 per cent. There is an average difference of 8 per cent more failures per grade in the non-consolidated counties than in the consolidated counties. Therefore, the expense attached to repeaters is approximately eight times as great in the non-consolidated counties as it is in the consolidated counties.

The difference in the degree of intelligence in the two groups of counties has not been determined. It is not believed, however, that there is such enough difference in intellect to cause such a difference in failure. The wide difference in per cent of failures in the grades of the two groups of counties might be attributed to the following factors: shorter school term, inexperienced teachers, greater per cent of teacher turn-over, many one, two, and

three-room schools, poorly trained teachers, many grades to the teacher, poor physical equipment.

Subjects Taken in High School

In order to show the number of high school subjects taken, Table 12 has been prepared. This table shows the number of subjects taken, the number failed, and the per cent failed in the eight non-consolidated and eight consolidated counties in Virginia during the session 1930-31.

Table 12. Showing the number of high school subjects carried, the number of subjects failed, and the per cent of subjects failed by the high school students in the two groups of counties.

Non-Consolidated Counties	Number of subjects taken	Number of subjects failed	Per cent of subjects failed
Patrick	359	88	24.5
Shenandoah	1101	158	14.35
Wythe	1887	231	12.24
Frederick	1093	104	9.51
Washington	2616	328	14.6
Montgomery	3410	177	5.19
Halifax	3117	399	12.83
Louisa	1100	216	19.63
Consolidated Counties			
Prince George	866	71	8.1
Prince Edward	1653	119	7.1
Princess Anne	1376	384	27.90
Southampton	5313	354	6.66
Hanover	1609	250	15.53
Dinwiddie	456	58	12.7
Henrico	2748	419	15.1
Nansemond	3296	394	11.9

For the convenience of the reader, the material in Table 12 has been summarized in the table which follows.

Table 13. Showing the total number of high school subjects carried, the total number of subjects failed and the per cent of subjects failed in the two groups of counties.

Counties	Total number of subjects taken	Total number of subjects failed	Median per cent of subjects failed
Non-Consolidated	14,683	1,701	13.7
Consolidated	17,317	2,045	12.3

The per cent of subjects failed by the two groups of counties is practically the same. In the non-consolidated counties the median per cent of the subjects failed was 13.7, whereas in the consolidated counties it was 12.3 per cent. It is difficult to obtain a worthwhile comparison of subjects failed in a single school or school system, likewise, the comparison is still more difficult in counties comprising many individual schools. Although it is true that all high schools of the state are supposed to use the same system of marking, the lowest passing mark (which is from 75 to 80 per cent) may represent a high standard in some school and a very low standard in others.

In the non-consolidated schools 14,683 subjects are carried by 4,500 high school students. In the consolidated counties 17,317 subjects are carried by 3,994 high school students. More subjects are carried and less subjects are failed in the consolidated counties than in the non-con-

solidated counties. If the subjects taken were apportioned equally among the high school students in the two groups of counties, we would find that each high school student would be carrying 3.2 subjects in the non-consolidated counties and 4.3 subjects in the consolidated counties. It appears that there is little difference in the per cent of subject failure in the two groups of counties.

Holding Power

Regardless of how well a school is organized or how efficient is its instruction, if it does not retain a large percentage of its pupils until they graduate from high school, it is to that extent failing in efficiency.

In order for a school to attract and hold its students it must be sufficiently organized and well adapted to meet the needs of the community. Its curriculum should be sufficiently broad to present satisfactory educational offerings to all. The building should be large enough to provide ample space for satisfactory work and the teaching force well qualified to train the students in all phases of school work. Small schools find it difficult to measure up to this requirement, due largely to the small teaching staff. Students of education contend that it is doubtful if satisfactory schooling can be had in small rural schools without a per capita cost which is prohibitive. Authoritative studies of state school organizations

as well as recent surveys show that the typical small unit is very expensive for the quality and quantity of instruction received. The remedy for the maladjusted situation in the small schools calls for an enlargement of its educational units. Through this plan greater educational opportunities should exist.

Larger high schools permit a teaching situation much more favorable than could be had in smaller schools. We usually find in these larger high schools in consolidated counties well-constructed buildings; school buildings located in better consolidated districts compare favorably with schools of urban and city districts. Besides the curriculum items, teaching, and social activities, the mingling of a larger group of students presents an opportunity to build up a spirit and pride that could not be very well had in smaller units. This is a factor often over-looked; nevertheless, it has its influences in attracting students as well as in holding them.

Students are not attracted to small high schools as they are to larger ones. Later on in this study the author will show that pupils finishing the elementary grades in consolidated counties have a higher percentage of pupils to enter high school than those who complete their elementary work in the non-consolidated counties. Another condition found to exist in the small high schools in the non-consolidated counties is that students enter these schools, complete two or three years of training, and transfer to

some accredited high school to graduate. This likely accounts for the fact that a smaller per cent of elementary pupils fail to enter high school in counties having small units. These two items are important and should not be over-looked in comparing the holding power of schools in the two groups of counties.

In order to show the extent to which the high school and elementary school enrollment remains in school, Table 14 is arranged. This table shows the total elementary enrollment, the per cent of the high school enrollment to the elementary enrollment, the number of high school graduates, the total high school enrollment, and the per cent of high school graduates to the high school enrollment in the eight non-consolidated and eight consolidated counties in Virginia during the session 1930-31.

Table 14. Showing the elementary enrollment, the per cent of high school enrollment to elementary enrollment, the total number of high school graduates to the total high school enrollment, and the per cent of high school graduates to high school enrollment.

Non-Consolidated Counties	Total elementary enrollment	Per cent of high school enrollment to elementary enrollment	Total high school enrollment	Total number of high school graduates	Per cent of high school graduates to high school enrollment
Patrick	3,932	60.9	273	32	11.7
Shenandoah	4,100	32.00	875	134	15.31
Wythe	4,434	10.30	457	68	14.87
Frederick	2,561	51.11	131	19	14.50
Washington	5,325	18.40	984	151	15.34
Montgomery	3,741	13.60	509	84	16.50
Halifax	4,711	21.05	992	139	14.01
Louisa	1,643	16.80	279	28	10.03
Consolidated Counties					
Prince George	1,091	18.15	198	41	20.70
Prince Edward	924	39.28	363	58	15.95
Princess Anne	1,625	26.46	430	47	10.93
Southampton	2,014	32.44	653	90	13.78
Hanover	2,068	27.27	564	76	13.47
Dinwiddie	1,453	20.50	298	54	18.12
Henrico	3,709	28.9	1,097	119	10.85
Nansemond	1,653	23.65	391	71	18.16

To assist the reader in interpreting the material in Table 14, the table is condensed in Table 15.

Table 15. Showing the total elementary enrollment, the high school enrollment, the per cent of high school enrollment to elementary enrollment, the number of high school graduates, and the per cent of high school graduates to high school enrollment.

	Total elementary enrollment	Total high school enrollment	Per cent of high school enrollment to elementary enrollment	Total number of high school graduates	Per cent of high school graduates to high school enrollment
Non-Consolidated Counties	30,447	4,500	14.78	635	14.13
Consolidated Counties	14,627	3,994	27.2	556	13.92

The elementary enrollment in the non-consolidated counties is 30,447; the high school enrollment is 4,500. The elementary enrollment in the consolidated counties is 14,627; the high school enrollment is 3,994. In the non-consolidated counties the per cent of high school enrollment to elementary enrollment is 14.78; whereas, in the consolidated counties the per cent is 27.2. The per cent of high school enrollment to the elementary enrollment in the consolidated counties is much greater than in the non-consolidated counties; there is a difference of over 50 per cent, which

is a highly significant fact.

School men may want to know what has become of the elementary pupils who did not enter high school after completing the elementary grades. This study does not find out why these pupils did not enter high school for further training. It is possible that elementary facilities and training in the non-consolidated counties were of such a nature that they served to eliminate the less determined pupils.

A study to determine the instructional differences in large and small schools was conducted by Timon Covert which showed that students entering high school from one-teacher schools make lower scores on subjects tested than children of large elementary schools. There was also an average difference of ability of about 4.9 months which favored the larger schools. (5)

The per cent of students graduating from the two groups of counties is nearly the same. The high school enrollment in the non-consolidated counties is 4,500, of that number 655 or 14.13 per cent graduated. In the consolidated counties, the high school enrollment is 3,994. Of that number 556 or 13.92 per cent graduated. The difference in per cent of graduates in the two groups of counties is .21 per cent which is insignificant.

The school system that is retaining about 50 per cent more elementary pupils for further training is rendering a greater service to the state than the school system that

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(5) Covert, Timon. Educational Achievements of the One-Teacher and Larger Rural Schools. United States Bureau of Education. Bulletin No. 15. 1928. p. 17.

does not do this. The consolidated counties have a much better record in this respect than the non-consolidated counties, on the basis of the number of elementary children enrolled in high school; however, after entrance to high school, there is no appreciable difference.

Summary

The school population of the non-consolidated counties, elementary and high schools combined, is nearly twice that of the consolidated counties, but the per cent of enrollment to population is greater in the consolidated counties than in the non-consolidated. The per cent of the total enrollment to the total school population is 74 in the non-consolidated counties and 88 in the consolidated counties. The per cent of elementary enrollment to elementary population is 86 in the non-consolidated counties and 106 in the consolidated counties. In the high school department the per cent of high school enrollment to high school population in the non-consolidated counties is 31, and in the consolidated counties it is 54 per cent.

The enrollment in the elementary department in the non-consolidated counties having elementary and high schools combined is 31 per cent of the total enrollment; in the consolidated counties the enrollment is 47 per cent of the total enrollment. In the high school department of the non-consolidated counties, the enrollment is 13 per cent of the total enrollment, and in the consolidated counties the enrollment is 21 per cent of the total enrollment. In the

"other elementary schools" of the non-consolidated counties, the enrollment is 55 per cent of the total enrollment, while in the consolidated counties the enrollment is only 30 per cent of the total enrollment. This shows that the largest per cent of the enrollment of the non-consolidated counties is in the one, two, and three-room schools.

The average daily attendance in the elementary division of the non-consolidated counties is greater than in the consolidated counties. This difference is reversed in the high school department where the average daily attendance is greater in the consolidated counties than in the non-consolidated counties.

The pupils in the elementary grades of the consolidated counties have made greater progress from the point of view of promotion than the children of the non-consolidated counties. The non-consolidated counties averaged 8 per cent more high school failures per grade than the consolidated counties. In the high schools of the non-consolidated counties, 14,683 subjects were taken and 1,701 were failed, the median per cent of subjects failed being 13.7. In the consolidated counties, 17,317 subjects were taken and 2,045 were failed, the median per cent of subjects failed being 12.3.

The holding power of the consolidated counties is greater than that of the non-consolidated counties as evidenced by the fact that 27.2 per cent of the elementary enrollment entered high school as opposed to only 14.78 per cent in the non-consolidated counties.

Chapter V

TEACHER PERSONNEL

That the effectiveness of a school system is largely dependent upon the quality of the teaching staff is generally believed. Accordingly, the State Board of Education has adopted a rather definite policy toward certification of teachers. Different accrediting agencies, including the Southern Association of Secondary Schools and Colleges in which many Virginia schools hold membership, demand certain requirements of teachers in schools seeking membership in them. Both the public and the profession have called for better trained teachers. As a result of these demands the requirements for teaching certificates have been greatly raised.

The idea of professional training of teachers dates back hardly more than a century. It had its beginning in Europe, but in time made its way to America. At first, training in subject matter was stressed; theories and methods followed later. The education of the child consisted in putting-in knowledge, a general practice until the twentieth century.

In the course of time there came a reorganization in education. The education of the youth called for professionally trained teachers. In response to this, training schools or normal schools, as they were called, came into existence. At first these normal schools received elemen-

tary graduates; then the entrance requirement for admission was raised to graduation from high school. The normal schools later became teachers' colleges, and served as training institutions for prospective teachers.

Yet, in spite of all efforts that have been made, extending over a long period of time, the percentage of professionally trained teachers over the United States is still low, and in certain localities extremely low.

"The training of the staff is established from a legal standpoint by the certification law, from a moral standpoint by the accrediting bodies, and from a financial standpoint by the salary schedule." (1) The accrediting standards have been more rigid than the legal requirements for teachers, it being the general practice now for the accrediting agencies to require the equivalent of the bachelor's degree to teach any academic subject in high school. The requirements governing the issuance of elementary certificates have also been raised. Later in this study the author will present evidence to show that the academic preparation of high school teachers in Virginia will average nearly two years higher than that for grade teachers in the same system, but the strictly professional requirements for elementary and secondary teachers show no differences. It is becoming the practice now in many school systems to have the same professional requirements for both elementary and high school teachers, a much to-

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(1) Cooke, W.A. High School Administration. Warwick and York, Inc. Baltimore, Maryland. 1926. P. 125.

be-desired arrangement.

The salary of the teacher is largely in terms of the teacher's training. This has been true throughout the history of public education. Effective certification generally implies an adequate salary schedule in which the pay is directly proportionate to the training required. The legal certification laws may be raised, but many students of education believe that continual professional growth will be met in a satisfactory way only through financial reward.

Number of Teachers

Teachers in small villages and rural communities hold positions of strategic importance. They are the recognized educational leaders, and, in many cases, they are expected to take the lead in social, religious, and civic affairs. In the school, their work consists largely in stimulating, guiding, and directing the pupils.

Table 16 shows the total number of teachers employed in each of the three divisions; that is, the number in the elementary department of the schools in which elementary and high schools are combined in a single building, the high school department of these schools, and the "other elementary schools" in the eight non-consolidated and the eight consolidated counties in Virginia during the session 1930-31.

Table 16. Showing the total number of teachers in the elementary department of the schools in which elementary and high schools are combined, the number of teachers in the high school department, and the number of teachers in the "other elementary schools."

Non-Consolidated Counties	Number of teachers in		
	Elementary department of schools having elementary and high schools combined	High school department	"Other elementary schools"
Patrick	24	13	111
Shenandoah	47	27	86
Tythe	27	26	84
Frederick	16	11	54
Washington	72	51	124
Montgomery	30	10	66
Halifax	58	45	93
Louisa	20	16	30
Consolidated Counties			
Prince George	12	13	12
Prince Edward	31	17	0
Princess Anne	21	16	12
Southampton	53	32	13
Hanover	31	23	23
Dinwiddie	23	17	25
Henrico	55	36	45
Nansemond	31	20	20

Table 17 condenses the data in table 16 and in addition shows the per cent of teachers in the elementary department of schools having elementary and high schools combined, the percentage of high school teachers, the percentage of teachers in "other elementary schools."

Table 17. Showing the total number of teachers in all the departments, and the number and per cent of teachers in each division to the total number of teachers.

Counties	Total number of teachers	Elementary department of schools having elementary and high schools combined		High school department		"Other elementary schools	
		Number	Per-cent	Number	Per-cent	Number	Per-cent
Non-Consolidated counties	1162	294	25.30	212	18.24	656	56.45
Consolidated Counties	581	257	44.23	174	29.94	150	25.81

This table is arranged to show the size and distribution of the teaching force in the two groups of counties. The table reveals two things: first, a large per cent of teachers in the non-consolidated counties is found in the scattered, small elementary schools; in the consolidated counties, the elementary teachers are centralized in the elementary department of schools having elementary and high schools combined;

second, the percentage of the teaching force in the high school department is considerably larger in the consolidated counties than in the non-consolidated counties.

Training of Elementary Teachers

The character of the educational training of teachers in a school system is one measure of the teaching efficiency of that system. Undoubtedly good training should manifest itself in good teaching. An adequate salary schedule usually carries with it better trained teachers. The fact that ample remuneration draws to a school well-trained teachers is a foregone conclusion. The city with its attractive schedule often draws from rural territories the best of their teaching force. In fact, in most instances, the rural system serves as a training ground for the wealthier territory.

Conditions other than training and salary would of course affect the preparation of teachers, but higher standards of certification accompanied by a more adequate salary and more professional training would go far towards placing well-trained teachers in schools of all sections of the country, rural and urban alike.

Table 18 shows the total number and per cent of the different kinds of certificates held by teachers in the elementary schools of the eight non-consolidated and eight consolidated counties in Virginia during the session 1930-1931.

Table 16. Showing the number and kinds of certificates held by elementary teachers in the two groups of counties.

Non-Consolidated Counties	Kinds of Certificates Held							
	Total number of certificates	Collegiate Professional	Collegiate	Special	Normal Professional	Elementary	Elementary Professional	First Grade
Patrick	133	1	2	1	29	47	28	25
Shenandoah	128	2	0	9	20	74	12	11
Wythe	113	5	4	13	22	63	6	0
Frederick	67	2	5	7	12	30	5	6
Washington	198	1	6	39	35	107	6	4
Montgomery	96	4	7	12	11	52	6	4
Halifax	151	2	6	11	34	96	1	4
Louisa	69	1	1	3	9	34	11	0
Consolidated Counties								
Prince George	37	7	0	3	16	10	1	0
Prince Edward	12	0	0	3	5	4	0	0
Princess Anne	40	0	0	2	25	13	0	0
Southampton	62	5	1	1	46	9	0	0
Hanover	54	1	1	4	28	20	0	0
Dinwiddie	48	1	0	3	26	18	0	0
Henrico	102	7	1	5	62	17	0	0
Dansemond	52	8	1	1	34	8	0	0

The State Department of Education issues all certificates to teach in Virginia. These certificates are divided into the following groups: Collegiate Professional, Collegiate, Special, Normal Professional, Elementary, Provisional Elementary, and First Grade. The first three are generally looked upon as being high school certificates, however, the holders of such certificates may, and frequently do, teach in the elementary grades. The requirements governing certificates held by teachers at the time of this study will be found in a bulletin issued by the State Board of Education. (2)

The Collegiate Professional Certificate is issued to an individual who holds a college degree and has met the minimum professional educational requirements plus practice teaching (18 semester hours).

The Collegiate Certificate is issued to an individual who holds a college degree.

The Special Certificate is issued on the basis of completion of two years work in college.

The Normal Professional Certificate is issued to any one completing a two year course in college including the minimum educational requirements plus practice teaching.

The Elementary Certificate is issued on completion of one year or three-quarters of residence work in a standard teachers' training institution.

The Provisional Elementary Certificate is issued on the completion of the second third of work necessary for an Elementary Certificate.

The First Grade Certificate is issued on the completion of the first third of the work organized for an Elementary Certificate.

In order to condense the material in Table 18 and to show percentages for each type of certificate Table 19 has been arranged.

E. Virginia State Board of Education. Regulation Governing the Certification of Teachers in Virginia. Richmond, Virginia. November 1928.

Table 19. Showing the total number of certificates and the number and per cent of the different kinds of certificates to the total number of certificates.

Kinds of Certificates Held	Non-Consolidated		Consolidated	
	Number	Per cent	Number	Per cent
Collegiate Professional	18	1.0	29	7.0
Collegiate	31	3.2	4	.98
Special	94	9.0	19	4.0
Normal Professional	170	18.0	242	59.0
Elementary	503	53.0	112	27.0
Provisional Elementary	51	5.0	0	0
First Grade	76	8.0	1	.24
Total Number of Certificates	943		407	

Out of 943 teachers in the non-consolidated counties, 18, or 1 per cent, hold Collegiate Professional Certificates. Out of 407 teachers in the consolidated counties, 29, or 7 per cent, hold Collegiate Professional Certificates. The fact that teachers holding Collegiate Professional Certificates are teaching elementary work is encouraging only if the teacher has been trained in the field in which she teaches. Since the Collegiate Professional Certificate is the highest issued by the State Board of Education, the school system having the highest per cent of such certificated teachers is theoretically better off than the school system having fewer such certificated teachers. The con-

solidated counties have seven times as large a proportion of teachers with Collegiate Professional Certificates as do the non-consolidated counties. As has been pointed out, this difference is a gain only in terms of the education of the teacher to teach in the elementary school.

There is a larger percentage of teachers holding Collegiate and Special Certificates in the non-consolidated counties than in the consolidated counties. Out of 943 teachers in the non-consolidated counties 31, or 3 per cent, hold Collegiate Certificates. Out of 407 teachers in the consolidated counties, only 4, or .98 per cent, hold Collegiate Certificates. In the non-consolidated counties there are 94, or 9 per cent, of the teachers holding Special Certificates. Although the holder of the Collegiate Certificate is a college graduate, it does not mean that this person has had any special training for elementary or secondary work. The same rule applies to teachers who are holding Special Certificates and teaching in the grades. It is possible that the certificates were issued on the basis of work done in a particular field or fields, which might be entirely irrelevant to the grades taught. If such be the case, a county, although it may have a large per cent of teachers with Collegiate or Special Certificates, will not be especially benefitted.

The amount of work and the character of training necessary for one to obtain a Normal Professional Certificate indicates that the holder is well qualified for ele-

mentary work from the point of view of certificate requirements. The fact is significant that the consolidated counties have a larger per cent of teachers holding Normal Professional Certificates than the non-consolidated counties. In the consolidated counties, there are 242, or 59 per cent of the teachers, holding Normal Professional Certificates, whereas, in the non-consolidated counties, 170 or 18 per cent, hold Normal Professional Certificates. The consolidated schools have a decided advantage over the non-consolidated schools. An elementary school system having close to 60 per cent of the teachers holding Normal Professional Certificates is fulfilling the teachers' certification situation in a more creditable manner than the school system having but 18 per cent holding such certificates.

The greatest percentage of the teachers in the non-consolidated counties hold Elementary Certificates. This is evidenced by the fact that out of 943 elementary teachers, 503, or 53 per cent, hold Elementary Certificates. In the consolidated group, only 27 per cent of the teachers hold Elementary Certificates. In the non-consolidated group, 5 per cent of the teachers hold Provisional Elementary Certificates. In the consolidated counties, there are no such certificates. Eight per cent of the teachers in the non-consolidated group of counties hold First Grade Certificates as compared to .24 per cent in the consolidated group.

If the character of the certificate is in any way a reliable index to teaching efficiency, it is evident that the consolidated school system is much favored over the non-consolidated.

Training of High School Teachers

Table 20 and 21 show the kinds of certificates held by the high school teachers in the two groups of counties. Table 20 shows the total number of teachers and the kinds of certificates held by them; Table 21 is a condensed summary of Table 20.

Table 20. Showing the kinds of certificates and the total number of each kind held by the high school teachers in the two groups of counties.

Counties	Total Number of Certificates	Kinds of Certificates Held Number of		
Non-Consolidated		Collegiate Professional	Collegiate	Special
Patrick	17	7	4	6
Shenandoah	27	10	9	8
Wythe	19	11	5	3
Frederick	8	4	3	1
Washington	49	15	32	3
Montgomery	19	7	6	6
Halifax	46	21	14	11
Louisa	16	8	5	3
Consolidated				
Prince George	11	8	0	3
Prince Edward	13	6	7	1
Princess Anne	21	6	11	4
Southampton	32	21	9	2
Hanover	22	7	7	8
Dinwiddie	20	8	5	7
Henrico	35	13	12	10
Nansemond	23	15	4	4

For the purpose of making easier the comparison of the two groups of counties, Table 21 has been arranged.

Table 21. Showing the total number of certificates, the kinds of certificates and the number and per cent of each among the high school teachers in the two groups of counties.

Kinds of Certificates Held	Non-Consolidated		Consolidated	
	Number	Per cent	Number	Per cent
Collegiate Professional	83	41.29	83	46.89
Collegiate	77	38.30	55	31.07
Special	41	20.39	39	22.03
Total Number of Certificates	201		177	

There is not as much variation in the kinds of certificates in the high school department as there is in the elementary department. Out of 177 high school teachers in the consolidated counties, 83, or 46.89 per cent, hold the Collegiate Professional Certificate, which is the highest certificate the state issues. In the non-consolidated counties, out of 201 high school teachers, 83, or 41.29 per cent, hold Collegiate Professional Certificates. The teachers in the consolidated counties hold more top grade certificates than the teachers in the non-consolidated counties, the difference being about 5 per cent.

The per cent of Collegiate Certificates held is greater in the non-consolidated group than in the consolidated group. Out of 201 teachers in the non-consolidated counties, 77, or 38.30 per cent, hold Collegiate Certificates. In the consolidated counties, 55 out of 177, or

31.07 per cent, hold Collegiate Certificates. The percentage of teachers holding Special Certificates is practically the same; 20.39 per cent holds Special Certificates in the non-consolidated counties and 22.03 per cent in the consolidated group. The fact that the division of Special Certificates represents the smallest percentage of certificates in the two groups of counties is encouraging. The Special Certificate is no longer offered by the state except in case of Home Economics, Shop Work, and Manual Training. The consolidated counties are slightly favored over the non-consolidated counties in the kinds of certificates held by high school teachers.

Experience of Elementary Teachers

The task of handling children in an effective way calls for leadership, which comes through training and experience. Through experience one is given the opportunity to apply educational theories to classroom teaching.

The recognition of the relationship between experience and efficiency is shown frequently in salaries paid inexperienced principals and teachers. The relationship between experience and good teaching is especially noticeable where teachers have had very little or no professional training. Table 22 shows the number of elementary teachers who have had no experience, those who have had 1-3 years experience, 4-6 years experience, 7-10 years experience, 11-15 years

experience, and those who have had 20 years experience and over in the elementary grades of the two groups of counties.

Table 22. Showing the total number of elementary teachers, the number having had no experience, the number having had 1-3 years experience, 4-6 years experience, 7-10 years experience, 11-15 years experience, 16-19 years experience, and those having had 20 years experience and over in the elementary grades.

Counties	Years of Experience							
Non-Consolidated	Total number of teachers	0	1-3	4-6	7-10	11-15	16-19	20 and over
Patrick	133	36	49	25	10	8	3	2
Shenandoah	127	0	1	2	2	1	121	0
Wythe	112	18	32	24	15	13	5	5
Frederick	69	6	17	16	17	5	2	6
Washington	196	22	53	55	34	24	5	3
Montgomery	94	8	23	19	24	12	4	4
Halifax	151	19	35	35	40	18	4	0
Louisa	59	3	18	16	11	4	6	2
Consolidated								
Prince George	37	5	14	7	9	1	0	1
Prince Edward	12	0	2	2	4	1	0	3
Princess Anne	41	5	11	14	9	0	0	2
Southampton	60	5	24	16	5	5	4	1
Hanover	56	2	13	23	13	3	0	2
Dinwiddie	48	3	15	7	10	7	2	4
Henrico	100	7	20	11	22	21	5	14
Nansemond	51	11	18	15	4	3	0	0

The material in Table 22 has been condensed in Table 23 in order to facilitate comparisons. The condensed table includes all items in Table 22, and, in addition, shows the per cent of total teachers having given years of experience.

Table 23. Showing the total number of teachers, the number of teachers in each division according to teaching experience, and the per cent of teachers having given years of experience.

	Counties			
	Non-Consolidated		Consolidated	
Total of Teachers	941		405	
Years of Teaching Experience	Number	Per cent	Number	Per cent
0	112	11	38	9
1-3	228	24	117	28
4-6	191	20	95	23
7-10	153	16	76	18
11-15	85	9	41	10
16-19	150	15	11	2
20 and over	22	2	27	6

Out of the 941 elementary teachers in the non-consolidated counties, 112, or 11 per cent, have had no experience; out of 405 teachers in the consolidated group, 38, or 9 per cent, have had no experience. In the division of 1-3 years experience in the non-consolidated counties, there are 228 teachers, or 24 per cent;

in the consolidated counties, there are 117 teachers, or 28 per cent. In the division of years 4-6, there are 191 teachers, or 20 per cent, in the non-consolidated counties; in the consolidated group, there are 95 teachers, or 23 per cent. In the division of 7-10 years experience, there are 153 teachers, or 16 per cent, in the non-consolidated group. Within the same division in the consolidated counties, there are 76 teachers, or 18 per cent. The non-consolidated counties have 85 teachers, or 9 per cent of the teaching force, with 11-15 years experience; the consolidated counties have 41 teachers, or 10 per cent of the teaching force. In the non-consolidated counties, there are 150 teachers, or 15 per cent who have had 16-19 years of experience; in the consolidated group, there are only 11 teachers, or 2 per cent. In the division of 20 years experience or over in the non-consolidated counties, there are 22 teachers, or 2 per cent; in the consolidated group, there are 27 teachers, or 6 per cent.

One cannot say to what extent more experience leads to efficiency. Neither group of counties is employing an excess of inexperienced teachers, nor is continuing to employ teachers who have been in service too long. One can say, however, that in all cases, except one, the division 16-19, the evidence in respect to experience is slightly in favor of the consolidated counties.

Experience of High School Teachers

Experience is highly important if the experience is successful, and it means still more if this experience is gained in the field in which one has had his major training. Often teachers gain experience in subjects not of their major field or related field of preparation, and for that reason such experience means little.

The one difficulty connected with experience is that of ascertaining a true knowledge as to the actual value of it. If it were possible to get the true character and quality of one's actual experience, it would stand out above all other things in improving one's certificate as well as influencing his appointment to an advanced teaching position.

Table 24 shows the total number of high school teachers, the number of teachers with no experience, the number with 1-3 years experience, 4-6 years, 7-10 years, 11-15 years, 16-19 years, and the number with 20 years experience and over in the two groups of counties.

Table 24. Showing the total number of teachers in the high schools, the number having had no experience, the number having had 1-3 years experience, 4-6 years, 7-10 years, 11-15 years, 16-19 years, and 20 years or more experience.

Counties	Years of experience							
Non-Consoli-dated	Total number of teachers	0	1-3	4-6	7-10	11-15	16-19	20 and over
Patrick	16	3	2	3	3	3	1	1
Shenandoah	26	1	8	4	4	3	1	7
Wythe	19	1	8	6	0	0	2	2
Frederick	8	3	1	0	2	2	0	0
Washington	44	4	13	9	9	0	3	6
Montgomery	20	1	5	3	3	5	0	3
Halifax	46	3	13	18	7	5	0	0
Louisa	16	2	8	3	2	0	0	1
Consolidated								
Prince George	14	0	7	2	1	3	0	1
Prince Edward	13	0	7	2	2	1	0	1
Princess Anne	17	6	5	0	3	0	0	3
Southampton	33	4	14	6	6	2	1	0
Hanover	21	1	1	3	6	7	0	3
Dinwiddie	20	1	4	7	3	3	0	2
Henrico	37	4	8	9	9	3	0	4
Nansemond	20	1	6	7	3	2	0	1

The material in Table 24 has been condensed into Table 25. By bringing the material together in a summary of this kind, the author will enable the reader to more quickly interpret it. This table includes all the items of Table 24, and, in addition, the per cent of each division of years experience to the total number of teachers.

Table 25. Showing the total number and per cent with given years of teaching experience.

	Counties			
	Non-Consolidated		Consolidated	
Total of Teachers	197		175	
Years of Teaching Experience	Number	Per cent	Number	Per cent
0	18	9	17	9
1-3	58	29	52	29
4-6	46	23	36	18
7-10	30	15	33	18
11-15	18	9	21	12
16-19	7	3	1	.57
20 and over	20	10	15	8

A glance at the above table shows that there is very little difference in experience between the two

groups of counties. The per cent of teachers having had no previous experience and those having had 1-3 years experience is the same for the two groups of counties. There is a slight difference of experience in years 7-10 as well as in years 11-15; in each division there is a difference of 3 per cent in favor of the consolidated counties. The reverse is true in respect to 16-19 and 20 years of experience and over; the experience in the latter two cases favor the non-consolidated counties.

In order to determine the actual value of experience, one must consider the conditions under which it was obtained. The larger high school usually has several classes in each subject, as a result of which teachers are enabled to teach in the major field of their training. In a smaller high school, the enrollment does not justify as many classes, and thus a teacher may be required to teach a variety of subjects having little or no relation to her special training. Experience gained in a large school set up is proper, the training means efficiency, and of course the students receive the benefit in the end. Experience gained under adverse conditions tends to have the opposite effect.

> "Here experience by itself does not signify much. It may possibly have been obtained under such conditions as to injure the candidate. For example, a year of rural experience without supervision may lead to habits of school management that prove a handicap when the teacher enters a town system to teach a large grade. Experience means something if

successful, and it means more if it is successful and gained under teaching conditions similar to those obtained in the position for which the applicant wishes to qualify." (3)

Teacher Turnover

The success of a school is somewhat dependent on the permanency of the teaching staff. The teacher tenure in a given locality is dependent on several factors; among such are: the ability of the teacher, personality of the teacher, willingness to cooperate, results obtained, salary, and the success of the teacher in adjusting herself to the environment.

The community has a very definite responsibility to teacher tenure. The success of teachers is greatly dependent on the ability and willingness of the community to pay teachers, to support education, and to cooperate in bettering social conditions.

Perhaps there are but few things more detrimental to the efficiency of a school system than to have a big percentage of new teachers each year. This applies to small schools as well as to large ones. The fact that the teacher turnover in the small schools is so great is due primarily to the lack of funds on the part of the communities to hold them. Large systems attract teachers

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3. Cook, William A. Federal and State School Administration. Warwick and York, Inc. Baltimore, Maryland. 1927. pp. 229-30.

on account of their salary schedule; consequently, the small communities serve as a training ground for the large schools. The remedy for this situation calls for more adequate pay in rural centers and for better educational and social conditions.

Table 26 shows the per cent of teacher turnover in the elementary department of schools having elementary and high schools combined, in the high school department, and in the "other elementary schools" in the two groups of counties.

Table 26. Showing the per cent of teacher turnover in the elementary department of schools having elementary and high schools combined, in the high school department, and the "other elementary schools".

Non-Consolidated Counties	Per cent of Teacher Turnover in		
	Elementary department of schools having elementary and high schools combined	High school department	"Other elementary schools"
Patrick	50.6	18.4	56.9
Shenandoah	33.6	26.7	23.2
Wythe	25.0	18.7	62.6
Frederick	33.31	0.0	36.7
Washington	9.0	16.6	42.7
Montgomery	46.7	11.0	73.1
Halifax	17.3	36.8	30.8
Louisa	36.1	6.6	51.0
Average	28.9	16.8	47.1
Consolidated Counties			
Prince George	5.3	0.0	6.0
Prince Edward	10.6	21.6	0.0
Princess Anne	16.0	9.0	10.6
Southampton	19.1	22.7	41.6
Hanover	13.4	37.4	37.1
Dinwiddie	18.5	6.4	1.4
Henrico	6.0	14.8	13.0
Nansemond	6.5	5.2	4.5
Average	11.9	13.4	14.3

In the elementary department of the non-consolidated counties the per cent of teacher turnover is about 2½ times as great as it is in the consolidated group. The per cent is 28.9, in the non-consolidated group; whereas, in the same department in the consolidated counties, the per cent is only 11.9.

In the high school department the per cent of difference is not as great; however, it is significant when we find that the per cent is 16.8 in the non-consolidated counties as compared to 13.4 per cent in the consolidated group.

The "other elementary schools" in the counties again present the most pronounced contrast. Nearly 50 per cent of the teachers in the non-consolidated counties change each year. In the same division in the consolidated counties, the per cent is only 14.3. In other words, three teachers change in the non-consolidated counties while one teacher changes in the consolidated group.

If teachers are constantly moving and shifting from one school to another, as well as entering other fields, they have difficulty in knowing the nature of pupils, their capacities, and their interests. It takes time for teachers to know their pupils as well as their environments.

> "The evils of a markedly unstable teaching force or one requiring a large proportion of new teachers each year are numerous: (a) the education of chil-

> dren suffer greatly under the instruction of new and inexperienced teachers; (b) proper grading in the schools is seriously handicapped where each new teacher must learn the children anew; (c) the identification of the teacher with community life is impossible and, therefore, her efficiency is greatly curtailed." (4)

Frequent changes as a rule interfere with the efficiency of the school administration and with class room instruction. In small communities the teachers are regarded as the educational leaders; they have an opportunity to render service to the community from a social and civic as well as from an educational standpoint. Well-trained, progressive teachers, remaining in the community for a reasonable period of time, can do as much to solve the rural school problem as any other agency or factor.

> "It is generally recognized that the efficiency of any working group is seriously decreased by a high percentage of teacher turnover. The more skill the work envolves the greater are the losses resulting from frequent desertion by workers of the group. The loss is especially high in teaching, where a knowledge of individual children, of conditions in a community, and of the subject-matter and activities of the curriculum are essential to a high type of teaching effort." (5)

The schools in the consolidated counties present a more wholesome view in respect to teacher turnover than the schools in the non-consolidated counties. If permanency of the teaching staff is any index to the efficiency

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(4) Virginia Education Survey Commission, The Public Schools of Virginia. Everett Waddy Company, Richmond, Virginia. 1919. P. 137.
(5) A Handbook of Major Educational Issues. Research Division, The National Education Association. Volume IV. September, 1926. P. 177.

of a school system, the consolidated schools are greatly favored over the non-consolidated.

Teaching Load

A much mooted question in elementary school administration is that of the size of classes. Some school men advocate a relatively large number of pupils per teacher. They contend that good administration should provide a teaching situation whereby teachers who are capable of instructing large classes, and prefer to do so, should be encouraged and assisted in this undertaking. Other school men discourage large classes on the grounds that children in the elementary grades are at the ages when they need all the individual help and encouragement that can be given them.

Studies have been made showing results of large and small classes, and conclusions have been reached to the effect that there is no necessary connection between the size of the class and the efficiency of instruction measured by the grades. (6) It is generally felt that the best results are obtained in classes which range from about thirty to thirty-five pupils in a single grade. (7) There are gains of different kinds to be had from large

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(6) Smith, Dora. Class Size in High School English. University of Minnesota Press. 1931. Chapters 1 and 2.
(7) Gloucester County, Virginia. Educational Survey Report. State Board of Education. Richmond, Virginia. Volume XI, Number I. Pp. 33-34.

and small classes, but the particular objection to small classes is the large per capita cost of instruction.

In high school, we usually look upon the work assigned teachers in terms of teaching load rather than the number of pupils per teacher or the pupil-teacher ratio. It is rather difficult to separate teaching load and pupil-teacher ratio, for they are closely related. For example, some teachers have a very heavy teaching load in respect to the number of periods actually taught, yet the pupil-teacher ratio is small. On the other hand, there are teachers who apparently have a very light teaching load based on the number of periods taught; still they have a heavy teaching load, due to the number of pupils in class. It can be easily seen that a teacher teaching five periods per day may not be teaching any more pupils than a teacher who teaches three periods per day.

The amount of work assigned high school teachers is in terms of pupil-hour load. A pupil-hour is one hour of recitation per pupil. In illustrating a teacher's load, we may take, as an example, a teacher who teaches five classes per day, five times per week with thirty pupils to the class; this would give 5 X 5 X 30, a total pupil-hour load of 750 per week. The Southern Association of Colleges and Secondary Schools places 750 pupil-hours per week as the maximum teaching load.

Table 27 shows the average number of pupils per teacher in the elementary department of the high schools

having elementary and high schools combined in one building and the average number of pupils per teacher in the "other elementary schools" in the two groups of counties.

Table 27. Showing the average number of pupils per teacher in the elementary department of schools having elementary and high schools combined and the average number in the "other elementary schools."

Non-Consolidated Counties	Average Number of Pupils Per Teacher in	
	Elementary department of schools having elementary and high schools combined	"Other elementary schools"
Patrick	26.29	29.73
Shenandoah	53.19	16.60
Wythe	47.40	37.42
Frederick	27.68	39.22
Washington	36.75	21.61
Montgomery	41.20	38.87
Halifax	29.70	32.12
Louisa	34.05	25.31
Total Average	37.58	29.02
Consolidated Counties		
Prince George	25.33	32.79
Prince Edward	29.80	0.0
Princess Anne	46.42	29.54
Southampton	30.98	28.61
Hanover	41.12	34.47
Dinwiddie	32.78	25.80
Henrico	36.58	38.02
Nansemond	36.61	25.90
Total Average	35.14	37.35

There is but little difference between the counties in the number of pupils per teacher in the elementary department of the schools having elementary and high schools combined. In the non-consolidated counties the average number of pupils per teacher is 37.58, whereas, in the consolidated counties the average number of pupils per teacher in these schools is 33.14.

Although the number of pupils per teacher is nearly the same in the two groups of counties, the school set up is different. The chief difference is in the size of schools having elementary and high schools combined. In the non-consolidated counties, these schools, for the most part, are numerous and have a small enrollment; whereas, in the consolidated counties a reverse situation is found. However, there are some high schools in the non-consolidated counties that compare favorably with those found in the consolidated; for example, high schools located in small towns and villages have identical characteristics of the large schools in the consolidated counties.

There are more pupils per teacher in the "other elementary schools" in the consolidated counties than in the non-consolidated. In the non-consolidated counties, the average number of pupils per teacher is 29.02; in the consolidated counties, the average number of pupils per teacher is 37.35. There is a difference of 8.33 more pupils per teacher in the consolidated counties than in the non-consolidated. The proportionate instruction cost

should therefore be lowered with no decrease in instructional efficiency.

It should be remembered that the enrollment of the "other elementary schools" in the two groups of counties is scattered usually in one, two, and three-room schools; and the teachers have to teach all the grades enrolled. It is probably true that the teaching situation in these schools is not as favorable as that in the elementary department of the schools having elementary and high schools combined. These schools make up 55 per cent of the enrollment of the non-consolidated counties and only 30 per cent of the enrollment of the consolidated counties.

Table 28 shows the range of the teaching load and the number of teachers within each range in the high schools of eight non-consolidated and eight consolidated counties in Virginia during the session 1930-1931.

Table 28. Showing the range of the teaching load and the number of teachers within each range in the high schools in the non-consolidated and consolidated counties.

Range	Non-consolidated Counties								Consolidated Counties							
	Patrick	Shenandoah	Wythe	Frederick	Washington	Montgomery	Halifax	Louisa	Prince George	Prince Edward	Princess Anne	Southampton	Hanover	Dinwiddie	Henrico	Nansemond
1100 1050-															1	
1000											1					
950						1					1					
900		1										1	1		1	
850						1							2		3	
800	1				1	1					1	1				1
750	1	2	3		1								1	1		
700	1	1	3		1	2					1	2	1		1	
650	1	2	3		2	1	1		2	1	1	2	4		4	1
600	2	2	1			1	3	2		1		3	3	3	3	1
550		5	2	1	2	2	7	1		2		2	1		5	1
500			1		3	1	6	1	1	1	2		2	1	4	2
450			1	1	7		9	2	1	5	2	3	3		5	1
400		6		1	6		2	1	1	1	1	3	2	2	1	2
350	2	2	2		5		8	4	2	2	2	3	1	4	1	2
300	1	3	2	1	6	3	3	1		3		2		1		1
250		4	1	2	2		8	1	1	2	2	2	2	5	1	2
200	4	4		3	9	1	2		2			5	1			4
150		3	2	2	2	1	1	1	1		3	4		1		2
100	1	1		2	6			1	1		1	1		1	1	
50 0 -		1			3	1					1	1				

The material in Table 28 has been arranged in a condensed table, Table 29, which shows the range, the number of teachers, and the per cent of teachers in each grouping for each teaching load.

Table 29. Showing the range of the teaching load and the number and per cent of teachers in the four teaching load groupings for the two groups of counties.

Groupings	Non-consolidated Counties		Consolidated Counties	
	Number of teachers	Per cent of teachers	Number of teachers	Per cent of teachers
Above 750	13	5.96	16	8.98
750-500	60	27.52	58	32.58
499-350	59	27.09	50	28.08
349-50	86	39.44	54	30.33

The above table reveals certain significant facts. In the first grouping of the non-consolidated counties, there are thirteen teachers, or 5.96 per cent, who have a teaching load above 750 pupils per week. In the same grouping for the consolidated counties, there are sixteen teachers, or 8.98 per cent, who have a teaching load over 750 pupils per week. In the second grouping of the non-consolidated counties, there are sixty teachers, or 27.52

per cent, who have a teaching load between 600 and 750 pupils per week. In the same grouping of the consolidated counties there are fifty-eight teachers, or 32.58 per cent. In the third grouping of the non-consolidated counties, there are fifty-nine teachers, or 37.09 per cent; in the consolidated counties, there are fifty teachers, or 28.08 per cent. In the fourth grouping of the non-consolidated counties, there are eighty-six teachers, or 39.44 per cent; in the consolidated group, there are fifty-four teachers, or 30.3 per cent.

Table 30 shows the range and the median teaching load in each of the eight non-consolidated and eight consolidated counties.

Table 30. Showing the range and median teaching load in each of the non-consolidated and consolidated counties.

Counties	Median Load	Range
Non-Consolidated		
Wythe	503.7	160-775
Montgomery	500.0	85-975
Halifax	461.0	155-650
Shenandoah	410.2	86-920
Patrick	375.0	100-830
Louisa	354.0	125-620
Washington	350.0	55-815
Frederick	202.5	140-530
Median Teaching Load	400.0	
Consolidated		
Hanover	599.0	230-945
Henrico	562.8	145-1075
Princess Anne	475.0	72-1015
Prince Edward	450.0	275-660
Southampton	408.3	75-945
Prince George	375.0	113-665
Nansemond	375.0	165-800
Dinwiddie	363.71	100-750
Median Teaching Load	450.0	

The median teaching load of the consolidated counties is greater by 50 than that of the non-consolidated; the teaching load in the former is 450, and in the latter it is only 400. These differences are not significant unless they indicate greater instructional economy in the consolidated counties.

Summary

A comparison of the number of teachers in the two groups of counties shows that there are twice as many teachers in the non-consolidated counties as there are in the consolidated counties. A review of the distribution of the teachers in the various departments of the two groups of counties shows: first, that about 50 per cent more teachers are in the elementary department of the schools of the consolidated counties having high school and elementary work combined than are in the like department of the non-consolidated counties; second, that there is nearly a third more teachers in the high school department of the consolidated counties than in the same department of the non-consolidated counties; third, that there is a complete reversal of this situation in the "other elementary schools". The "other elementary schools" of the non-consolidated counties have about 50 per cent more teachers than the same schools of the consolidated counties.

The teachers in the consolidated counties as a group hold higher grade certificates than the teachers in the non-consolidated counties. The difference in the grade of certificate is particularly noticeable in the elementary department, while in the high school department the grade of certificate varies very little.

What has been said in regard to the grade of certificate of the two groups of counties is equally applicable to the experience of the teaching staff. From the view point of experience, the teachers as a whole have had longer experience in the elementary grades of the consolidated counties than in these of the non-consolidated counties. In the high school department, there is very little difference in the experience of the teachers.

Possibly the biggest difference in per cent of any of the items dealt with in this chapter is that of the teacher turnover. In the non-consolidated counties the teacher turnover in the elementary department of schools having elementary and high schools combined is 2½ times that of the consolidated counties. Likewise, the per cent of teacher turnover in the high school department of the non-consolidated counties is greater than that of the consolidated counties; similarly, in the "other elementary schools" we find the teacher turnover three times as great in the non-consolidated counties as in the consolidated counties.

The number of pupils per teacher in the elementary

department of schools having elementary and high schools combined is nearly the same in the two groups of counties. In the non-consolidated counties, the average number of pupils per teacher is 37.58, whereas, in the consolidated counties, the average number of pupils per teacher is 35.14. The "other elementary schools" show a greater difference in the average number of pupils per teacher in the two groups of counties. In the non-consolidated group, the average number of pupils per teacher is 29.02, and in the consolidated, the average number of pupils per teacher is 37.35; there are about 8 more pupils per teacher in the consolidated counties than in the non-consolidated counties.

In the high school department the teachers in the consolidated group of counties have a heavier teaching load than those of the non-consolidated counties. The median teaching load in the consolidated group of counties is 450 and the median teaching load in the non-consolidated counties is 400.

Chapter VI

PROGRAM OF STUDIES

Modern educators believe that the high school program of studies should be adapted to the needs of the communities in which the pupils reside. There is no guarantee, however, that the students trained in a certain high school will remain in that community after graduation, and for that reason care should be taken in arranging the program of studies so that this theory will not be carried too far.

The program of studies offered in a secondary school is largely determined by the size of the school. In a school having few teachers, the number of subjects is limited. In a larger school where there are more teachers, there is a better opportunity for a more varied program, and the students are able to select the studies best suited to their needs. The smaller schools are usually restricted to the standard or college preparatory offerings. A study of curriculums offered in rural and semi-rural schools, made by Emery N. Ferris, showed that the curriculum offered by the smaller schools was restricted largely to the standard or traditional type. (1)

This chapter will present material on three phases of

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(1) Ferris, Emery N. The Rural High School. Government Printing Office. Bulletin Number 10. 1925. pp. 53-54.

instructional efficiency: first, the subjects offered in the high schools; second, a measure of the quality of instruction; and third, a measure of the quantity of instruction.

Subjects Offered in High School

The subjects occupying a prominent place in the curriculum are: English, mathematics, natural science, and social science. Other subjects are: Latin, modern foreign languages, vocational and practical arts. Table 31 shows the subjects offered and the per cent of high schools which offer these subjects. The subjects are: English, mathematics, natural sciences, social sciences, Latin, modern foreign languages, practical arts, and vocational subjects.

Table 31. Showing the subjects offered and the per cent of high schools in each group of counties offering these subjects during the school year 1930-31.

Subjects	Percentage of high schools in counties offering each subject							
	Non-Consolidated Counties							
	Patrick	Shenandoah	Wythe	Frederick	Washington	Montgomery	Halifax	Louisa
English	100	100	100	100	100	100	100	100
Business Arithmetic	100	100	100	100	100	75	100	100
Algebra	66	88	66	75	100	75	100	100
Plane Geometry	66	55	44	75	32	66	80	75
Solid Geometry		22	50	25	32	33	10	
Trigonometry								25
General Science	100	77	75	75	48	100	80	50
Chemistry		44		25	24	33	50	50
Physics					8	33		
Biology	66	55	33	75	72	66	20	
Geography								
History	100	100	100	100	100	75	100	100
Guidance		7					30	
Bible		22			8			
Latin	100	88	40	25	72	33	100	100
French	66	77	80	50	48	33	30	50
Spanish		25						
Typewriting						100		
Shorthand						100		
Bookkeeping								
Spelling		33						75
Commercial Law								
Home Economics			40		32	66	20	50
Agriculture			33	75	64	66	20	50
Manual Training				25				

Table 31 continued.

Subjects	Percentage of high schools in counties offering each subject							
	Consolidated Counties							
	Prince George	Prince Edward	Princess Anne	Southampton	Hanover	Dinwiddie	Henrico	Nansemond
English	100	100	100	100	100	100	100	100
Business Arithmetic	40	100	33	100	50	100	100	100
Algebra	33	100	100	100	100	100	100	100
Plane Geometry		36	33	100	32	100	80	100
Solid Geometry		36	33	56		80	40	100
Trigonometry								
General Science	100	64	66	70	50	75	100	100
Chemistry	33	48	66	70	50	75	80	75
Physics	33		66			25	20	
Biology		16	33	70	50	50	80	25
Geography			66	14	16		60	25
History	100	100	33	100	100	100	100	100
Guidance			100					
Bible						25		
Latin	66	100	100	100	100	100	100	100
French		64	33	100	60	75	80	
Spanish	33							
Typewriting	33						40	
Shorthand	33		33				80	
Bookkeeping			33				40	25
Spelling	33							
Commercial Law			33				20	
Home Economics	33			28	32	25	40	50
Agriculture	33			28	16	75	20	75
Manual Training								

For the purpose of facilitating comparison between counties, the author has prepared a condensed table.

Table 32. Showing the subjects offered and the average per cent of high schools in each groups of counties offering these subjects.

Subjects	Percentage of high schools in counties offering each subject.	
	Non-Consolidated Counties	Consolidated Counties
English	100	100
Business Arithmetic	96	77
Algebra	83	91
Plane Geometry	61	60
Solid Geometry	21	39
Trigonometry	3	
General Science	75	78
Chemistry	28	62
Physics	5	13
Biology	48	48
Geography		2
History	96	100
Guidance	4	
Bible	3	3
Latin	69	95
French	54	51
Spanish	3	4
Typewriting	12	9
Shorthand	12	18
Bookkeeping		12
Spelling	13	4
Commercial Law	1	6
Home Economics	28	26
Agriculture	44	30
Manual Training	3	

In compiling the data on the subjects, the author was concerned with the subjects offered in a particular school and not the number of units in any subject. For example, some of the large high schools may offer twenty to twenty-five units for graduation, whereas, some of the smaller high schools may give only 16 to 18. Some counties may offer 4 units in each subject while other counties may offer one, two, and three.

The subjects offered in the two groups of counties show a remarkable similarity to the subjects occupying a permanent place in the program of studies. Mathematics, natural science, and social sciences are found in the greatest percentage of schools; Latin, modern foreign language, vocational subjects, and practical arts are found in a smaller percentage of schools.

In comparing the per cent of offerings in the two groups of counties, we find that English is given by 100 per cent of the high schools in the two groups of counties. Under mathematics we find that business arithmetic is offered by 96 per cent of the high schools in the consolidated counties and by 77 per cent of the high schools in the non-consolidated counties. In the non-consolidated counties, algebra is offered in 83 per cent of the high schools, whereas in the consolidated counties, it is offered in 91 per cent of the schools. The difference in business arithmetic and algebra means very little.

since business arithmetic was offered for the first time in 1930. Some schools put in business arithmetic that year in place of algebra; other schools waited until the following year. Consequently, the comparison of business arithmetic and algebra is based on unsettled years, and for that reason it has very little value. Plane geometry is offered in 61 per cent of the schools in the non-consolidated counties as compared to 60 per cent in the consolidated. Solid geometry is offered in 21 per cent of the schools in the non-consolidated group of schools and in 39 per cent of those in the consolidated. Trigonometry is offered in 3 per cent of the non-consolidated schools; it is not offered at all in the consolidated. There is very little difference in the offerings of mathematics between the two groups of counties.

In the non-consolidated counties, general science is offered in 75 per cent of the schools as compared to 78 per cent in the consolidated schools. Only 28 per cent of the schools in the non-consolidated group of counties offer chemistry as compared to 62 per cent in the consolidated group. In the non-consolidated counties, 5 per cent of the schools offer physics; in the consolidated counties 13 per cent offer physics. Biology is offered by the same per cent of high schools in the two groups of counties, that per cent being 43. Geography is not offered at all in the non-consolidated counties and by only 2 per

cent of the schools in the consolidated counties. The natural science offerings are greater in the consolidated counties.

Under social sciences, we find that history is offered in 96 per cent of the schools in the non-consolidated counties and in 100 per cent of the schools in the consolidated counties. Guidance as a course is given in 4 per cent of all schools in the non-consolidated counties; it is not given in the consolidated group. A course in guidance was offered for the first time during the session 1930. Some of the schools put in this course, others continued history; consequently, the comparison of the offering of this subject has little value. There is little difference in the social science offerings in the two groups of counties.

Latin affords a rather striking contrast. In the non-consolidated counties, 69 per cent of the schools offer Latin; whereas in the consolidated counties 95 per cent offer Latin.

The difference in the per cent of schools offering modern language is not significant. French is offered in 54 per cent and Spanish in 3 per cent of the schools in the non-consolidated counties, while in the consolidated group French is offered in 51 per cent and Spanish in 4 per cent of the schools.

The difference in per cent of subjects offered under the division of practical arts is not significant. In the

non-consolidated centers, typing is offered in 12 per cent of the schools, while it is offered in only 9 per cent in the consolidated counties. Shorthand is offered in 12 per cent of the schools in the non-consolidated counties and in 18 per cent of the consolidated schools. Bookkeeping is not offered in the non-consolidated schools, but is offered in 12 per cent of the schools in the consolidated counties. Spelling as a separate subject is offered in 13 per cent of the schools in the non-consolidated counties and in 4 per cent of the consolidated counties. One per cent of the schools in the consolidated counties offer commercial law as compared to 6 per cent of the schools in the consolidated counties. The consolidated schools have a slightly better set of offerings.

The vocational subjects offered by the two groups of counties are slightly better in the non-consolidated counties. Home economics is offered by 28 per cent of the schools in the non-consolidated group of counties; 26 per cent of the schools offer home economics in the consolidated counties. Agriculture is offered by 44 per cent of schools in the non-consolidated counties and by only 30 per cent in the consolidated. Manual training is offered by 3 per cent of the schools in the non-consolidated counties and not at all by the schools in the consolidated group.

The difference in the offerings in the subjects in the two groups of counties is not very pronounced; however, the consolidated group of counties seems to have a slightly

better program of subject offerings. The outline below summarizes the different offerings.

Subjects having about equal offerings	Subjects offered more frequently in the consolidated counties	Subjects offered more frequently in the non-consolidated counties
English	History	Business Arithmetic
Plane Geometry	Algebra	French
Biology	Solid Geometry	Guidance
Spanish	Chemistry	Typing
Home Economics	Physics	Algebra
Bible	Latin	Manual Training
	Shorthand	Trigonometry
	Commercial Law	
	Bookkeeping	

The non-consolidated counties are probably offering subjects which should not be given with such a small teaching force. If these schools want to offer such subjects they should consolidate.

Quality of Instruction

Two measurements of educational efficiency are used in this study. One deals with the quality of instruction, and the other deals with the quantity of instruction. The author is interested in discovering the differences that exist in the quality and the quantity of instruction between the non-consolidated and the consolidated counties.

The data used in determining a measure of the quality of instruction are taken from the results of the Otis Classification Test. The Otis Classification Test has two parts, an Achievement Test (Part I) and a Mental Test (Part II). A Virginia State testing program, under the

direction of Dr. C.E. Myers, Department of Research, State Board of Education, Richmond, Virginia, has been in progress in recent years. In this program the Otis Test was given to children in the seventh grades in the several counties of Virginia. The results of their scores were assembled and tabulated in the office of the State Department of Education. From these tabulations the author secured his data for investigating the achievement in the two groups of counties.

In considering this division of the study, which deals with the quality of instruction, the author desires to point out the fact that, for several reasons, the available data used are inadequate as a measure of the quality of instruction: first, the test is not intended as an achievement test and for that reason is not an adequate measure of quality of instruction; second, the test is of a general survey nature and does not cover items which children in the localities have been taught; third, the questions are too few in number for an accurate survey of learning. These data were used because they were the only ones that could be secured which gave any sort of objective measure of achievement differences. The reader is cautioned not to put too much reliance in the results.

In order to arrive at a measure that could be used to show differences that might exist in educational efficiency, the educational quotient was calculated for the mean achievement scores of each of the counties. That

is, the mean achievement score of the pupils in a county was treated as an individual pupil score. The educational quotient is the ratio of the pupil's educational age to his chronological age. Otis defines it as a measure of a pupil's "acceleration or retardation in school achievement". In calculating this for each of the counties, the author used Table 2 in the Otis Manual of Directions.

To arrive at this measure the average score of the children in each county was substituted for a mean arrived at by calculating the individual educational quotient for each child in the county. The same was true for the mean of the chronological age of the children of the county. The educational quotient was then determined thus: Take the mean chronological age of the children in the county, read from Table 2 in the Otis Manual of Directions the expected achievement score in that chronological age. Take the actual mean achievement score and add to it 100, from this subtract the expected score, and read from the table. The result is the educational-quotient score, which is used in this study as the only available means for measuring the quality of instruction.

There are two irregularities noted in these tests: first, in the non-consolidated group of counties, data for Shenandoah County were not available. The results for this group of counties are, therefore, for only seven counties. Second, These tests were given during the school year 1931-32, while all other materials used in

the study are from the school year 1930-31.

Table 33 has been prepared to present the results of the Otis Classification Test. This table shows the number of pupils tested, the mean chronological age in the fall of 1931, the mean score (Part I) in the spring of 1932, the educational quotient of each of the two groups of counties, and the median educational quotient for the consolidated and the non-consolidated counties.

Table 33. Showing the number of pupils tested, the mean chronological age, the mean score of Part 1, the educational quotient of each county, and the median educational quotient on the Otis Classification Test for the non-consolidated and consolidated counties.

Counties	Number of pupils	Mean chronological age, Fall 1931	Mean score Part I, Spring 1932	Educational quotient
Non-Consolidated				
Patrick	857	146.0	37.9	91
Shenandoah				
Wythe	1,417	146.0	39.0	92
Frederick	791	148.0	41.7	94
Washington	1,556	147.0	39.6	93
Montgomery	1,186	146.0	40.1	93
Halifax	677	143.7	44.0	99
Louisa	657	146.0	38.5	92
Median		146.1	40.1	93.5
Consolideted				
Prince George	445	141.0	43.1	100
Prince Edward	511	143.0	41.8	97
Princess Anne	596	138.0	46.0	105
Southampton	866	143.0	44.7	100
Hanover	874	148.0	39.5	92
Dinwiddie	691	142.0	48.2	104
Henrico	420	140.0	47.1	105
Nansemond	552	142.0	39.5	98
Median		142.1	43.7	100.0

There are certain significant facts recorded in this table. The mean chronological age of the 7,141 pupils in the non-consolidated counties is 146.1 months; of the 5,957 pupils in the consolidated group it is 142.1 months. There is a difference of 4 months in chronological age. The children tested in the non-consolidated counties are nearly a half year older than those in the consolidated group. The mean score of Part I, or the achievement score of the testing in the spring of 1932, shows that the children in the non-consolidated schools made a score of 43.7. There is a difference of 3.6 points in the score of the two groups of counties, which is in favor of the consolidated schools. Further, it appears that children in the consolidated counties, although about one half school year younger than those of the non-consolidated group, make on an average nearly 4 points more on the same test. There is a difference which operates in favor of the consolidated schools, but we do not know the reliability of this difference.

The median educational quotient in the non-consolidated counties is 93.5, whereas the median educational quotient in the consolidated group is 100.00. There is a difference of 6.5, which favors the consolidated group of counties. It should be remembered that the achievement scores (mean score, Part I) purport to measure the effect of school training; through the pupil's educational quo-

tient we may discover his acceleration or retardation in his school achievement.

Relying upon the educational quotient as the means used in measuring the instructional efficiency of the two groups of counties, the statistical results seem to bear out the fact that instructional efficiency in the consolidated counties is superior to that in the non-consolidated group.

Quantity of Instruction

The quantity of instruction is not measured in terms of any given fact or factor, but in terms of educational results secured by combining several factors. For this reason a ratio was calculated, which took into account various combinations of relevant factors.

The quantity of instruction is an arbitrary standard, or point of reference; in Virginia it is set at 180 days schooling for each member of the school population.

The formula for determining the quantities of instruction is as follows:-

$$\frac{\text{(Average daily attendance x No. days in school session)}}{\text{No. in school population x } 180} \times 100$$

"This formula for an index number is offered as a more reliable and more valid measure of general efficiency of a school system in predicting educational results than can be secured by combining and weighting a large number

of factors which are supposed to make for educational efficiency."(2)

By employing such factors, we are able to give the per cent that the actual total school attendance is of the standard attendance.

This measure was used by Dr. Charles Everett Myers, Research Secretary of the State of Pennsylvania, as one of the ways in determining the Relative Efficiency of School Districts of Pennsylvania.(3)

Table 34 shows the school population, the average daily attendance, the length of school term in days, and the per cent that the actual school attendance is of the standard attendance in the elementary grades of the eight non-consolidated and eight consolidated counties in Virginia during the session 1930-1931.

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(2) Measuring Educational Efficiency. Research Bulletin, Pennsylvania State Educational Association. 400 North Third Street, Harrisburg, Pa. Bulletin No. 3. January, 1928. p. 37.

(3) Ibid. The formula used by Dr. Myers of Pennsylvania had 300 days of schooling as being standard. Virginia recognizes 180 days or 9 months as being standard, and for that reason the formula has been changed in that particular.

Table 34. Showing the school population, the average daily attendance, the length of school term in days, and the per cent that the actual total school attendance is of the standard attendance in the elementary grades of the two groups of counties.

Non-Consolidated Counties	School population	Average daily attendance	Length of term in days	Per cent that the actual total attendance is of the standard attendance
Patrick	3,927	2,576.0	170	61.95
Shenandoah				
Wythe	3,030	3,032.0	170	94.80
Frederick	2,447	1,847.9	160	67.12
Washington	5,702	5,214.0	170	86.36
Montgomery	3,596	3,083.7	128	60.78
Halifax	5,029	4,076.0	170	76.54
Louisa	1,439	1,111.4	170	72.94
Total Average		20,941.1	162.5	
Consolidated Counties				
Prince George	1,141	1,827.0	180	90.00
Prince Edward	1,077	749.0	100	69.54
Princess Anne	1,281	1,027.0	100	80.17
Southampton	1,817	1,566.8	180	86.22
Hanover	1,951	1,827.0	180	93.64
Dinwiddie	1,246	1,260.5	180	69.84
Henrico	3,686	2,222.0	180	60.28
Nansemond	1,356	1,405.0	180	103.61
Total Average		11,426.3	180	94.2

In the non-consolidated counties, the average daily attendance is 20,941, and the average length of school term is 162.5 days. In the consolidated group of counties, the average daily attendance is 11,426.3, and the length of school term is 180 days. The total school population in the non-consolidated counties is 25,175; in the consolidated group of counties it is 13,555. The standard length of school term in both groups of counties is 180 days.

The per cent that the actual total attendance is of the standard attendance in the non-consolidated counties is 75.1; in the consolidated the per cent is 84.2. A relatively larger percentage of the population is in the schools of the consolidated counties than is in the schools of the non-consolidated. Even if the quality of instruction were the same in the two groups of counties, the consolidated counties would still be serving the communities better, because a larger percentage of their population is found in school. This difference is large enough to be important.

Summary

The program of studies offered in the high schools of the two groups of counties is nearly the same. The offerings are slightly better in the consolidated counties, but the difference is insignificant.

According to the results of the Otis Classification

Test, there is a significant difference in the quality of instruction in the seventh grades of the two groups of counties. The median educational quotient of the consolidated counties is 100; the median educational quotient of the non-consolidated is 93.5. There is a difference of 6.5 points in the quotient of the two groups, which is in favor of the consolidated counties.

The measure used in determining the quantity of instruction was that of ascertaining the per cent that the actual total attendance was of the standard attendance. In the consolidated counties, the per cent of such attendance was 84.2; in the non-consolidated, the per cent is 75.10. There is a difference of 9.10 per cent, which favors the consolidated counties.

Chapter VII

CONCLUSIONS AND RECOMMENDATIONS

Throughout this study the author has attempted to deal with the facts in a fair and impartial way, and in summarizing the findings, to base his conclusions wholly on the analysis of the information assembled. It should be remembered that the findings of this study are based on data for one school year.

The conditions discovered by this investigation are:

1. The elementary and high school population of the non-consolidated counties is about double that of the consolidated counties.
2. In the consolidated counties the largest percentage of the elementary and high school enrollment is in the schools having elementary and high schools combined; in the non-consolidated counties the largest percentage of the enrollment is in the "other elementary schools".
3. The per cent of the total enrollment to the total school population is greater in the consolidated counties than in the non-consolidated. The per cent of the elementary enrollment to the elementary population is greater in the consolidated counties than in the non-consolidated; the per cent of the high school enrollment to the high

school population is also greater in the consolidated counties.

4. The average daily attendance is better in the elementary schools of the non-consolidated counties than in the elementary schools of the consolidated. In the high school department, a different situation exists, the average daily attendance in the high school department is greater in the consolidated counties than in the non-consolidated

5. The per cent of elementary failures in each grade is greater in the non-consolidated counties than in the consolidated counties.

6. The holding power in respect to the elementary enrollment is much greater in the consolidated counties than in the non-consolidated. In the high school, the holding power is about the same in the two groups of counties.

7. In regard to the distribution of the teaching force, in the consolidated counties, the largest percentage of the teachers is found in the schools having elementary and high schools combined; in the non-consolidated, the largest percentage of the teaching force is in the "other elementary schools".

8. A larger percentage of higher grade certificates is found in the elementary and high schools of the

consolidated counties than in the same schools in the non-consolidated counties.

9. From the point of view of the length of experience, the teachers in the elementary department of the consolidated counties have an advantage over the non-consolidated; the length of the teaching experience in the high school department of the two groups of counties is nearly the same.

10. The per cent of teacher turnover in the elementary department of schools having the elementary and high departments combined in one building in the non-consolidated counties is more than double the turnover in the same type of schools in the consolidated counties; the per cent of the teacher turnover in the high school department of the non-consolidated counties is greater than that of the consolidated counties; and the per cent of teacher turnover in the "other elementary schools" of the non-consolidated counties is more than 75 per cent of that in the consolidated counties.

11. The average number of pupils per teacher in the elementary department of schools having elementary and high schools combined is about the same in the two groups of counties, but the average number of pupils per teacher in the "other elementary schools" is a little more in the consolidated

counties than in the non-consolidated.

12. The teaching load in the consolidated counties is heavier than that in the non-consolidated. The teaching load in the consolidated counties is more nearly the maximum set up by the Southern Association of Secondary Schools and Colleges.

13. The median teaching load in the consolidated counties is higher than that in the non-consolidated. In the consolidated counties, the average teaching load is 450 pupils; in the non-consolidated it is 400 pupils.

14. The program of studies shows a remarkable uniformity in the two groups of counties. The offerings, however, in the consolidated counties are slightly broader than the offerings in the non-consolidated.

15. The number of subjects taken and the number of subjects failed is greater in the consolidated counties, but the per cent of subjects failed is about the same in both groups.

16. The results of the Otis Classification Test, which was administered to students in the various counties of the state, when interpreted by the stated measures, show that the quality of instruction was superior in the consolidated counties. According to the measures used, the quantity of instruction also was superior in the consolidated counties.

Recommendation

This study, though not conclusive, shows the need of an adjustment on the part of rural communities in which there are many one, two, and three-room elementary schools, as well as small secondary schools. In such schools one of two things is inevitable; the standards of attainment will be low or the per capita cost of instruction will be relatively high. Students of education do not believe that these small schools are meeting the current demands of education from the point of view of social contact or subject oferings. The demand for variety of educational offerings necessitates a comparatively large and specialized teaching staff, large rooms, and more adequate library and laboratory facilities.

Probably, the best way to meet the current demands of education is through consolidation. Throughout this study, the comparison based on the data used, points to the fact that the consolidated school system is favored over the non-consolidated school system.

Hard-surfaced roads coupled with other means of transportation make the program of consolidation easy, as well as practical, in nearly every county in the state. Of course, in certain isolated communities, consolidation is impossible, as well as impractical, and for that reason the operation of small elementary schools is justified

regardless of cost.

It is believed that the adoption and carrying out of a consolidated school program will insure a sane, progressive policy of education that will better equalize education in rural communities, both elementary and secondary. It is also believed that consolidation will give the children of the various counties better educational opportunities than they now have.

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VITA

ROBIN H. OWEN

Born - - December 20, 1896 - Charlott County, Virginia

Attended Wylliesburg High School, Wylliesburg, Virginia - 1912, 1913

Attended Beaver Dam High School, Beaver Dam, Virginia

A. B. Degree - - College of William and Mary - June 1921.

Principal - - Cheriton High School, Cheriton, Virginia - 1921-1923

Principal - - Crewe High School, Crewe, Virginia - 1923-1932

Principal - - Oceana High School, Oceana, Virginia- 1933 --

APPENDIX

Williamsburg, Virginia
July 23, 1934

Supt._____
_____

My Dear Mr._____:

Your county, along with several others, has been chosen for study in connection with a thesis which I am preparing.

I have not been able to get all the information desired from the State Department. I am enclosing a blank which I shall greatly appreciate having your secretary fill in and return to me.

You will note that the information needed is within the year July 1930 to June 1931.

Thanking you for this favor, and trusting that I shall receive an early reply, I am

Yours very truly,

(Signed) R. H. Owen

THE QUESTIONNAIRE

Page 1

Please check the items listed and supply the information requested concerning the schools in your division for the school year, 1930-1931.

	High School Department			Elementary Department		
Name of schools	Enrollment	Average daily attendance	Percent of teacher turnover	Enrollment	Average daily attendance	Percent of teacher turnover

THE QUESTIONNAIRE

Page 2

Other Elementary Schools

Name of School	Enrollment	Average daily attendance	Percent of teacher turnover	Number teachers in school	Number of teachers holding each kind of certificate	Years of experience of each teacher	Length of term

All information pertaining to page one and page two of the questionnaire was listed for the superintendent to check, except the per cent of teacher turnover. This information was not clear from the State Office Records, and in order to secure the exact information, such was requested of the superintendent directly.