

# SATISFACTORY LOCAL SCHOOL UNITS

FUNCTIONS AND PRINCIPLES OF FORMATION,  
ORGANIZATION, AND ADMINISTRATION

*By*

HOWARD A. DAWSON

*Director of Information and Research  
Arkansas State Department of Education*

FIELD STUDY NO. 7

DIVISION OF SURVEYS AND FIELD STUDIES  
GEORGE PEABODY COLLEGE FOR TEACHERS  
NASHVILLE, TENNESSEE  
1934

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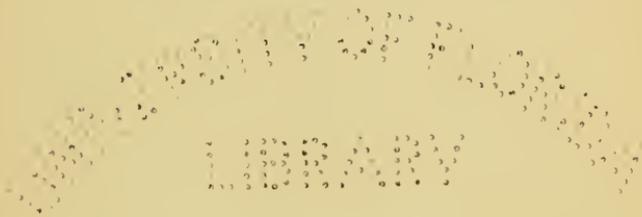
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## FOREWORD

The Division of Surveys and Field Studies of George Peabody College for Teachers, established and supported by the General Education Board, was founded upon two related ideas. The term *survey* covers the general field service of the Division which deals with problems common to many school systems. The major energies of the Division are devoted to practical field service, but in its field work problems arise which call for special study and research. It is, therefore, a part of the Division's program to publish and distribute from time to time field studies of far-reaching applicability and also more theoretical studies dealing with fundamental aspects of education.

The seventh of these studies to be published is *Satisfactory Local School Units*, by Howard A. Dawson. This study was planned under the guidance of Dr. Frank P. Bachman, late Director of the Division, and has been carried to completion as nearly as possible in conformity with the original plans. The materials presented embody the results of seven years' work in the planning and reorganization of school districts and the consolidation of schools. The situations studied by the author include practically all types of social and economic communities. It is published with the hope that it may provide helpful guidance for administrative reorganization and encourage fundamental rebuilding of our rural school system.

DOAK S. CAMPBELL.

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H. A. D.



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## CHAPTER I

### PLACE AND FUNCTION OF THE LOCAL SCHOOL UNIT IN PUBLIC SCHOOL ADMINISTRATION

The establishment, control, and support of public schools in the United States is a responsibility of the several states. The states have delegated this responsibility in large measure to local school units or districts. These local units may comprise a county, a township, a city, or a village, or they may be a designated area not coterminous with a governmental unit. In this latter case the school district may comprise only two or three square miles with a single one-teacher school. These school districts may be administered by a school committee, a board of education, or a school director, their powers being delegated in specific terms by the state legislature. (5: 11-12 and 4: 22-25.)<sup>1</sup>

The financial support of public schools in general has been imposed upon these local school districts. For example, state governments provided in 1927-28 an average of 16.2 per cent of the funds for the support of public schools and local districts provided 72.9 per cent. The remainder, 10.9 per cent, was provided by counties which may be classified as local districts. (1: 473.) Likewise, the states have delegated in large measure to local school units the responsibility for the conduct and management of their respective public schools. The school directors, school committees, or boards of education of each district are empowered to establish and maintain schools, employ teachers, contract debts, and levy taxes. In short, only

<sup>1</sup>These figures and all others cited hereinafter in similar form refer to the bibliographical references listed at the end of each chapter.

in certain broad general matters, such as, qualifications of teachers, minimum essentials of courses of study, uniform reports, length of school term, and certain protective and sanitary aspects of the school plant, has the state discharged its responsibility for schools directly. (4: 22-25.)

The performance of many functions of public education by local units of administration is thoroughly in keeping with the system of government in the United States. Three levels of governmental administration have been developed, national or federal, state, and local. These levels correspond, roughly at least, to the nature of the functions and to the character and extent of the services to be performed. That is, functions which are national in scope and interest tend to be discharged by the national government, those that are state-wide in scope by state governments, and those that are local in scope by local governments. Furthermore, the exercise of considerable control over public education by local units has been a necessary accompaniment of our policy of national expansion with its emphasis on local initiative and local self-government. Accordingly, our school system has developed through local desire, initiative, and financial support under the authority and frequently through the encouragement and financial aid of state legislation. In fact, it is more nearly folk-made than the educational system of any other nation. In many respects the American school system may be said to be the product of more than 145,000 school boards scattered throughout the forty-eight states and acting for their respective communities.

These local units of school administration, that have become so much a part of the American scheme of government, are widely different in type. In all, there are seventeen rather common types of school districts, and in addition school laws make reference to approximately sixty other school subdivisions, although most of these occur only two or three times, and constitute but slight variations from the common types. (7: 52.) These wide differences are to be found not only among the different states, but also within the states. Some states have designated a particular political subdivision, such as, the county, the township, or the municipality, as the unit of local school

administration. In such cases the control and management of the schools may or may not be independent of the control and management of other governmental activities carried on in such political subdivisions. Frequently these local subdivisions have no relationship to schools other than the fact that their boundaries are coterminous with the boundaries of the school districts. Some states, on the other hand, have local units of school administration that are in no way related to other local governmental units. Such school units are usually known as common school districts. They vary greatly in size and often are irregular in shape. Although organized for school purposes only, there is no clear-cut indication of the nature of the work such a unit should do.

Local units of school administration vary not only in general organization but also in area and in size of scholastic population. In scholastic population they vary from less than a dozen children in many rural districts to a million or more in some of our largest cities. In area they vary from less than one square mile<sup>2</sup> to nearly eight thousand square miles.<sup>3</sup> These variations, for which it is often difficult to find any consistent reason, are to be found in nearly all states that employ the common school district as the local unit of school administration. For example,<sup>4</sup> in one state there is a county in which the total area exclusive of two cities forms one school district with an area of 736 square miles and a density of population of forty-eight persons per square mile. In another county in the same state, with a density of population of forty-one persons per square mile, there are 137 school districts, an average of only seven square miles per district. These two counties are much alike in transportation facilities and community centers. With respect to homogeneity of population, the county having the small districts would appear more satisfactory as a single unit of school administration than the county having the large district. Similar examples of wide variations in the size of local units of school administration are present

<sup>2</sup>District No. 3, Nevada County, Arkansas.

<sup>3</sup>San Juan County, Utah.

<sup>4</sup>Pulaski and Washington Counties, Arkansas.

in all states that adhere to the common district type of school administration.

These wide variations in type and size of school districts result in equally wide variations in the kind, extent, and frequently in the quality of educational service offered to the children affected. Variations in educational service are related directly to the size of schools that districts maintain and to the taxable wealth of these districts. Thousands of small districts maintain only one-teacher and two-teacher elementary schools with limited curricula. Other thousands can offer high school advantages only through small schools with from one to four or five teachers and with a narrow and restricted curriculum. Even then the cost per student is often almost prohibitive. Thousands of these districts are too limited in wealth to pay for educational opportunities in keeping with modern social needs. Other thousands that have the wealth to pay for acceptable educational facilities do not have the number of children requisite to the maintenance of efficient schools. A vast majority of the districts, especially in rural areas, do not have school plants and equipment that conform in any acceptable degree to modern standards of safety, sanitation, and educational planning. Again these differences result largely from the financial inability of the districts to pay for buildings and equipment. Thousands of these local districts are practically without trained professional leadership and cannot afford to pay for the services of such leadership. In contrast with the conditions of these districts there are thousands of others that offer both elementary and high school facilities in schools sufficiently large to afford in an economical manner broad curriculum offerings under the direction of well-trained teachers. These other districts have the best of modern school plants and equipment, well-trained and experienced administrative and supervisory staffs, and sufficient taxable wealth to pay for these modern educational services without undue burdens on the taxpayers. In short, as is recognized by practically every authority on school administration in America, the small local unit of school administration is one of the chief obstacles to equality of educational opportunity and of tax burdens and to economy and efficiency in school management. (8.)

But in spite of these great variations in the type and size of local school units with the resultant inequalities of educational opportunities and of burdens of financial support, the preservation of the local unit of school administration appears to be desirable for the following reasons: (1) Such a policy is consistent with the firmly established American tradition and custom of local self-government; (2) it furnishes a means for maintaining a balanced distribution of educational functions among federal, state, and local interests; (3) it is best adapted to a democratic nation of wide geographical expanse and varied economic and social conditions; (4) it provides a safeguard against the evils of bureaucratic control and the widespread use of schools for propaganda in behalf of any economic, political, or social cult; (5) it encourages experimentation and variations that make schools responsive to local needs and aspirations. (10: 17-30.) Therefore, it is of vital importance to determine definitely the characteristics of a satisfactory local school unit. These characteristics can be determined only in terms of the functions a local school unit has to perform. (2: 145-56.) It is, therefore, safe to assume that a functional analysis of the work of the local school unit will furnish the data from which may be drawn definite conclusions as to the characteristics of a satisfactory local unit of school administration.

In this study the functions of a satisfactory and workable local school unit are held to be as follows:

1. To provide schools that have the qualities and characteristics necessary to make available to all persons of educational age residing in that unit educational opportunities commensurate with their varying needs, aptitudes, capacities, and interests, and with the needs of society for the services and cooperation of such persons.

2. To furnish either at local expense, or state expense, or both, at a cost that bears a reasonable relationship to the total current cost of the educational program, administrative and supervisory services necessary to facilitate the operation of the whole educational program.

3. To furnish, where the state does not guarantee the payment of the cost of the entire educational program, sufficient

financial resources to support a satisfactory educational program.<sup>5</sup>

It will be noted from the statement of functions made above that the first is concerned with the individual school attendance unit and the second with the administrative and supervisory unit. This differentiation of function requires that a clear distinction be made between the two kinds of units. In this study the first of these will be referred to as an *attendance or school unit* and the second as an *administrative unit*. An attendance or school unit comprises the geographical and population area served by a single school and does not necessarily constitute a local taxing unit nor have an independent system of administration. An administrative unit comprises all the area under a single system of local administration and may be composed of more than one attendance or school unit. It usually constitutes a local taxing unit. This study will be concerned with both kinds of local units, and since, in general, the smallest acceptable administrative unit will be one that is an acceptable attendance or school unit, the characteristics of a satisfactory attendance unit will be dealt with first.

The distinction between attendance units and administrative units indicates that there are two distinct problems of organization of territory into school units. The first problem pertains to the organization of areas of territory into attendance units. This problem, because it involves organizing the territory of an administrative unit or district into school or attendance units, is referred to as *internal organization*. The second problem pertains to the organization of the territory of the state into administrative units. This problem, because it involves the organization of the external controls of the schools located within the area affected, is referred to as the problem of *external organization*.

<sup>5</sup>If it is accepted as a fundamental principle—as it is later developed in this study—that the state should assure funds adequate to finance a satisfactory educational program, it necessarily follows that the taxable wealth of the area affected is of decreasing importance as a criterion for determining what is a satisfactory local unit of school administration. In states that assure the financial support of a satisfactory minimum program, it is a function of the local unit to encourage local initiative and thus to exceed the educational offering required and guaranteed by the state.

In this study the problems concerning the local school unit, both for attendance and for administration, will be discussed under the following topics:

1. *The characteristics of a satisfactory school.* These characteristics will furnish criteria for determining a satisfactory attendance or school unit.

2. *Satisfactory administrative and supervisory organizations.* The administrative and supervisory services required for a satisfactory unit of local school administration will be defined and the number of persons required for a satisfactory organization determined.

3. *The size of a satisfactory local unit of school administration.* It will be assumed that the size of the unit of administration should be such that adequate administrative and supervisory services can be offered at a cost that bears a reasonable relationship to the total current cost of the educational program offered by the local unit. It is necessary, therefore, to determine the expected cost of satisfactory administrative and supervisory organizations, and the total current cost of a satisfactory educational program, and to determine a reasonable relationship between these two items of cost. The way in which these factors will indicate at least the minimum size of a satisfactory local unit of school administration will be developed.

4. *The status of local units of school administration.* An analysis of the present status of local school units will make it possible to determine by application of the criteria previously defined to what extent a reorganization of local school units is needed. An analysis of the means now being used to overcome the limitations of small and inadequate local units will be helpful in determining procedures for reorganizing local units.

5. *The reorganization of local school units, both internal and external.* Procedure for reorganizing attendance or school units, and satisfactory administrative units will be described. The laws necessary to facilitate the reorganization of school units will be discussed.

6. *Financing the reorganized school system.* The treatment of this problem requires some inquiry into the nature of the

state's responsibility for adequate school finance, examination of present methods of apportioning state funds, a study of the relationship between the character of the local school unit and the apportionment of state funds, and the selection of equitable and effective methods of financing the reorganized school system.

7. *Results of reorganizing local school units.* Results indicating that educational opportunities are equalized at least up to acceptable minimum standards, and that financial burdens of school support tend to be equalized will be described.

#### SUMMARY

States have in large measure delegated their responsibility for the control and support of public schools to local school districts or units. These units will doubtless continue to hold an important place in the administration of our public school system since they are in harmony with the development of American governmental organization on the three levels, viz., federal, state, and local; they are consistent with American tradition, and provide opportunity for the preservation of local initiative.

Wide variations in the type, size, and educational efficiency of present local school units, and the resultant inequalities of educational opportunities and of financial burdens of school support require a clear definition of the characteristics of a satisfactory local unit of school administration. These characteristics must be determined on the basis of the functions a local unit of school administration has to perform.

The functions indicate that there are two types of units, which are designated in this study as attendance or school units, and administrative units. The problem of organizing attendance units is referred to as the problem of internal organization and the problem of organizing administrative units is referred to as external organization.

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## CHAPTER II

### THE CHARACTERISTICS OF A SATISFACTORY SCHOOL<sup>1</sup>

As stated in the previous chapter, the primary function of a local school unit is to provide adequate educational opportunities for the children living within its borders. If this function cannot be adequately performed by a given unit the unit should not be permitted to continue its existence, provided, of course, that a different type of local unit will give more acceptable and equitable opportunities. This requirement is equally applicable to attendance and administrative units. Therefore, any state that sets up and perpetuates school units that cannot provide adequate educational advantages for its children is permitting taxpayers' money to be wasted and is robbing children of their inalienable rights as American citizens. It may be added that there is evidence that in a majority of cases the states of the Union are failing to provide adequate educational facilities, some to a greater extent than others.

In the statements above the words "adequate", "acceptable", and "equitable" have been used as modifiers of "educational opportunities" and of "school facilities". What are adequate, acceptable, and equitable educational opportunities and school facilities? The answer to this question is to be found in the definition and description of the characteristics of a satisfactory school. Accordingly, the problem of chief concern in this chapter is the determination of the characteristics of a satisfactory attendance or school unit.

<sup>1</sup>The preliminary work on the contents of this chapter was done in cooperation with James W. Cammack, Jr., Director of Research, State Department of Education, Frankfort, Kentucky.

#### THE PURPOSES OF TAX SUPPORTED PUBLIC SCHOOLS

The characteristics of an acceptable school will be determined in large measure by the accepted definition of the purposes of public education. The broad purposes of American public education may be designated as political, economic, social, and individual. (49: 3.) The purpose of our education is political since under a democratic form of government such as ours it is necessary for the state to see that each individual possesses the knowledge, attitudes, and will to serve the government most effectively and exercise intelligently his privilege of suffrage. Accordingly, the states early began to make constitutional and legislative provisions for the establishment and maintenance of public schools equally free to all children. These public schools have, therefore, as a primary purpose the training of citizens and are in that respect political in their purpose. (58: 241-5.) The purpose of public schools is economic since the productive capacity of a people can be increased by increasing their knowledge, skill, and adaptability. Also, the demand for services and material goods can be increased by raising the standard of living of the people, an end which training offered in the public schools achieves. (11: 234-62.) The purpose of public schools is social because it is essential under our form of society that people be able to cooperate successfully in carrying on social enterprises. The more complicated modern institutions become, the more necessary it is that individuals understand their purposes and structure, and acquire attitudes of social cooperation. The purpose of the public schools is individual because it is inherent in the democratic ideal that all individuals be trained in the common integrating knowledges, skills, and attitudes, and in a vocation. (11: 50-1.) Accordingly the school must make provisions for individual differences in intellectual capacities, aptitudes, and interests in order to deal justly with the individuals concerned and to provide for the needs of society.<sup>2</sup> (39: 74-117; 62: 216-34.)

<sup>2</sup>For a good statement of the aims and purposes of public education, see *Report of Kentucky Educational Commission*, Chapter I, State Department of Education, Frankfort, Ky., October, 1933.

## SPECIFIC FUNCTIONS OF PUBLIC SCHOOLS

In order to accomplish the broad purposes of public education, the public schools have certain specific functions to perform. In order to provide for the needs of individuals according to their mental and physical development, these functions are divided into those of the elementary and secondary levels.

The functions of the elementary school are:

1. To bring together for educational purposes, regardless of social status and native endowment, all the children of the community, and to place them under the supervision of men and women carefully trained for the work of inducting these immature members into the life of modern society.

2. To foster activities that will insure the acquisition by the pupils of those basic skills, habits, attitudes, dispositions, ideals, and powers required of all members of organized society. The activities consist largely of the elementary mastery of the language and number acts, and through them the reading, imaginative study, and appreciation of those human experiences which have found expression in history, geography, social science, literature, art, music, and philosophy. The activities fostered should be appropriate to the mental and physical development of the children taught. It is now rather generally accepted that the elementary school should provide for approximately six years of training. (11: 402-35.)

The functions of the secondary school are:

1. To provide for an upward extension of the functions of the elementary school giving more comprehensive instruction in the fields begun on that level.

2. To provide the means by which the adjustment of the pupils to their social environment can be facilitated with the greatest amount of satisfaction to the pupils and to society.

3. To provide for the integration of social purposes and activities through the development in the secondary school population "of that amount of like-mindedness, of unity in

thought, habits, ideals, and standards, requisite for social cohesion and social solidarity.”

4. To provide for differentiation among the secondary school population through recognition of and provision for individual differences in abilities, capacities, and interests.

5. To provide preparatory training for the benefit of that part of the school population which should continue education in some higher institution.

6. To provide for selection among the secondary school population in keeping with the differences in individual capacities and with the varying needs of society. “In terms of school practice it means that if a pupil lacks ability or interest in one field of study but possesses ability and interest in another, discrimination is justified, and, particularly in the public secondary school, that pupil has a right to receive education in fields for which he possesses ability and interest. He cannot be deprived of the opportunity for education because of inability or lack of interest in some officially favored subject or subjects.” (39: 382.)

7. To provide for diagnosis of individual capacities and interests and for the direction of the pupil into fields in which he can work with most profit to himself and to society. “Hence the school must provide materials to acquaint the pupil with various activities of life, must give him some opportunity to test out and explore his capacities and interests and must provide some direction and guidance therefor.” (39: 381.)

It is reasonable to assume that the schools that best perform the functions required of them have certain characteristics in common which experience and scientific data have indicated to be fundamental. It follows that schools which do not have these characteristics cannot adequately perform the required functions. Analysis of an operating school program reveals that a curriculum is offered, a type of organization—an eight-year elementary school and a four-year high school or some other—is employed, there are a certain number of teachers with certain qualifications and with certain numbers of pupils, a school plant with certain equipment is in use, apparatus and instructional materials of certain kinds are available, there

is a certain length of school term, and frequently transportation facilities are provided for some of the pupils. These characteristics, if maintained to sufficiently high standards, will constitute a satisfactory school. Means of measuring each of these characteristics will be discussed in the following pages.

#### TYPE OF SCHOOL ORGANIZATION

Until recent years the usual type of school organization, known as the 8-4 plan, consisted of an elementary school with eight years or grades of instruction and a high school with four years of instruction. During recent years the trend of organization has been decidedly toward the six-year elementary school, the three-year junior high school, and the three-year senior high school, the 6-3-3 plan; or the six-year elementary school and the six-year high school, the 6-6 plan. The rapidity of change from the 8-4 plan of organization is reflected in the fact that although the first junior high schools were organized in Berkeley, California, and in Columbus, Ohio, as late as 1909, there were by 1926 in the United States about 1,100 separately organized junior high schools. (48: 8.) In fact, by 1926, 74 per cent of the cities having a population of 100,000 and over, and 61 per cent of the cities having a population from 30,000 to 100,000 were organized on the 6-3-3 plan. The more complete data as to this trend in type of organization, given in Table I, show that during the six-year period, 1920 to

TABLE I  
TREND IN THE TYPE OF HIGH SCHOOL ORGANIZATION IN THE  
UNITED STATES, 1920-26\*

TYPE OF HIGH SCHOOL	ENROLLMENT		PER CENT INCREASE
	1920	1926	
All Public High Schools	1,999,106	3,741,073	87.14
Regular	1,667,480	2,201,675	32.04
Junior	37,331	628,809	1,584.42
Senior	17,791	290,454	1,532.59
Junior-Senior and Un- divided	276,504	620,135	124.28

\*48:8.

1926, the percentage of pupils enrolled in high schools with junior and senior high schools in separate organizations increased over 1500 per cent and the enrollment in high schools organized with the six years of junior-senior high school in one organization increased more than 124 per cent. These increases are in striking contrast to an increase of only 32 per cent in enrollment in high schools organized on the four-year basis. These data, of course, reflect the change from the eight-year elementary school to the six-year elementary school.

The reasons for this trend in type of organization are to be found in the attempt to make the divisions of the school system conform more nearly to the natural psychological, physiological, and social development of the pupils to be taught. Studies in psychology have shown that a rather distinct period of development known as adolescence is reached by children by the seventh year of school life, and that in approximately three more years the full development into adolescence occurs. The organization of the school system on the basis of six years in the elementary school and two divisions of three years each in the high school is an attempt to place under separate organizations pupils in these more or less distinct periods of development. (46: 250-2.)

Furthermore, the organization of the school system has changed from the traditional 8-4 plan because it is a waste of time to spend eight years on the traditional elementary school curriculum. It has been demonstrated that the fundamental elementary subjects can be learned sufficiently well in the first six years, thus allowing the other two years for differentiated courses. The new plan of organization offers more interesting fields of study, opportunity for exploration in various fields of activities, discovery of aptitudes, more adequate guidance; and surrounds pupils with other individuals of similar interests and development. All of these advantages tend to reduce elimination from school and failure in school subjects. It is further claimed by competent authority that the new plan of organization has bridged the gap between the elementary school and the high school, and has largely eliminated the break which comes at the close of the compulsory school age. (46: 250-2.)

## THE CURRICULUM

The curriculum of the school consists of all the activities, courses of study, subjects, and materials which are used as the means of attaining the objectives and fulfilling the purposes of the school. It is rather generally agreed that in order to achieve these purposes the curriculum should be such that pupils will be provided instruction and training in health knowledge and health habits, in civic knowledge, in the fundamental tool subjects, in worthy uses of leisure time, in avocational and vocational pursuits, and that they will be provided guidance for active participation in civic and social affairs, and in wholesome home life. (47: 212, and 6: 11-16.) For convenience of discussion the chief facts concerning the scope of the curriculum on the different levels will be presented under the heads of the curriculum of the elementary school, of the junior high school, and of the senior high school.

THE CURRICULUM OF THE ELEMENTARY SCHOOL: As the interrelationships of society have become more complicated, many adjustments and expansions have been made in the elementary school curriculum. It now contains at least four times as many studies and activities as it did in the early pioneer days. In short, a new conception of the function of the school is now held, and the modern school is expected "to offer opportunity to practice life, to develop skills and habits, to create attitudes, and to train in reflective thinking and analysis." Table II shows the expansion in the elementary school curriculum from 1775 to 1900. Since 1900 new methods of teaching have been emphasized in these subjects and the content of the various subjects has been changed and expanded.

The curriculum now considered adequate to achieve the purposes of education provides training in reading (including phonics and literature appreciation), arithmetic, language (both oral and written) and grammar, writing, spelling, geography, history, citizenship and civics, nature study and elementary science, art, music, health (including elementary physiology and hygiene), and physical training. Besides these subjects the schools are frequently required by law to teach other subjects, such as, thrift, fire prevention, state his-

TABLE II  
THE EVOLUTION OF OUR ELEMENTARY SCHOOL CURRICULUM, AND OF METHODS OF TEACHING (17:17)

	1775	1825	1850	1875	1900
READING <i>Spelling</i>	{READING* Declamation	{READING* Declamation	{READING Literary Selections	{READING Literary Selections	{READING* LITERATURE*
<i>Writing</i> {Catechism BIBLE	{SPELLING* Writing Good Behavior Manners and Morals	{SPELLING WRITING <i>Manners</i> <i>Conduct</i>	SPELLING PENMANSHIP* <i>Conduct</i>	SPELLING PENMANSHIP* <i>Conduct</i>	Spelling Writing*
<i>Arithmetic</i>	ARITHMETIC*	{MENTAL ARITH.* CIPHERING	{PRIMARY ARITH. ADVANCED ARITH.	{PRIMARY ARITH. ADVANCED ARITH.	ARITHMETIC
	<i>Bookkeeping</i> GRAMMAR	<i>Bookkeeping</i> <i>Elementary</i> <i>Language</i> GRAMMAR	{Oral Language* GRAMMAR	{Oral Language* GRAMMAR	{ORAL LANGUAGE Grammar
	<i>Geography</i>	Geography	{ <i>Home Geography</i> * TEXT GEOGRAPHY	{ <i>Home Geography</i> * TEXT GEOGRAPHY	{Home Geography TEXT GEOGRAPHY*
		<i>U. S. History</i>	{U. S. HISTORY <i>Constitution</i>	{U. S. HISTORY <i>Constitution</i>	History Stories* TEXT HISTORY*
		<i>Object Lessons</i>	{ <i>Object Lessons</i> * Elem. Science* <i>Drawing</i> * <i>Music</i> <i>Physical</i> <i>Exercise</i>	{ <i>Object Lessons</i> * Elem. Science* <i>Drawing</i> * <i>Music</i> <i>Physical</i> <i>Exercise</i>	{Nature Study* <i>Elem. Science</i> <i>Drawing</i> * <i>Music</i> <i>Play</i> <i>Physical Training</i> * <i>Sewing</i> <i>Cooking</i> Manual Training

Capitals—Most important subjects.  
Ordinary type—Subjects of medium importance.  
Italics—Least important subjects.  
\*New methods of teaching now employed.

tory, elementary agriculture, U. S. Constitution, and safety. These legal requirements usually can be met through instruction in the regular subjects, but frequently the schools are required to devote a stipulated number of minutes per week to such subjects.

THE CURRICULUM OF THE JUNIOR HIGH SCHOOL: The junior high school curriculum provides for the discharge of two basic functions: (1) The continuation of integration through the tool subjects and the social studies, and (2) the provision of broad opportunity for exploration. As will be seen from data to be presented later, the program of studies is not arranged into curricula as in the senior high school, but rather is divided into constants taken by all students and variables through which opportunity for exploration is provided.

An analysis of 139 junior high school programs of study from thirty-one states made by the Research Division of the National Education Association shows the subjects offered and the average number of periods per week devoted to each subject for each of the three years of the junior high school. These data which appear in Table III indicate the extent of the curriculum

TABLE III  
PROGRAM OF STUDIES FOR A JUNIOR HIGH SCHOOL BASED ON PRACTICE IN  
139 JUNIOR HIGH SCHOOLS IN 31 STATES<sup>1</sup>

SEVENTH GRADE		EIGHTH GRADE		NINTH GRADE	
<i>Subject</i>	<i>Av. No. Periods Per Wk.</i>	<i>Subject</i>	<i>Av. No. Periods Per Wk.</i>	<i>Subject</i>	<i>Av. No. Periods Per Wk.</i>
English	7 <sup>2</sup>	English	6 <sup>2</sup>	English	5
Social Studies	7 <sup>2</sup>	Social Studies	6 <sup>2</sup>	Social Studies	5
Mathematics	5	Mathematics	5	Health	3
Health	3	Health	3	Mathematics	5
Music	2	Music	2	Foreign Lang.*	5
Industrial Arts	3	Industrial Arts	3	Industrial Arts*	6
Home Econom.	3	Home Econom.	3	Home Econom.*	6
Art	2	Art	2	Music*	4
		Foreign Lang.*	5	Commercial*	
		Science	3	Studies	5
				Science	5
				Art	5
Total Periods	32	Total Periods	38	Total Periods	54

<sup>1</sup>48:23.

<sup>2</sup>Each of these subject groups has more than five periods per week because it includes two or more subjects.

\*Variables.

offering considered necessary for a comprehensive junior high school.

There is no complete agreement in practice, but expert opinion agrees that English, social studies (history, geography, civics), general science, general (or composite) mathematics, and health (including physical education) should be constants, and that industrial arts, commercial subjects, home economics, art, music, science, and foreign languages should be offered as electives or variables, the number of variables depending upon the size of the school.

**THE CURRICULUM OF THE SENIOR HIGH SCHOOL:** The curriculum of the senior high school has the general function of providing training for cultural and social living and of offering training in specialized fields of vocational or avocational pursuits. The divisions of the curriculum should have their origin in the occupational expectations of the groups in the school population. Occupational expectations need not be interpreted as meaning specific trades or semi-professional work, but should comprehend the broad occupational fields.

Data are available which suggest the groups to be accommodated in the modern high school, and thus provide a basis for determining the minimum program that should be offered in the senior high school. Coxe in a study of the occupational expectations of 2,254 pupils of forty-four small high schools of New York reported that 52 per cent expected to enter the professional fields; 21 per cent, commercial; 7 per cent, industrial; 6 per cent, agricultural; 10 per cent were undecided; and the remaining pupils were scattered among domestic and personal service and the army and navy. (16: 106.) Bass has reported that of 5,639 graduates of 364 county high schools of Tennessee in 1929, 45 per cent expected to enter higher institutions of learning; 7 per cent, teaching; 11 per cent, farming; 9 per cent, business; 7 per cent, trades, and the other 21 per cent, other work, or unknown. (4: 72.) Data collected by Counts from large city high schools, including 7,979 boys graduating in Bridgeport, Connecticut; Mt. Vernon, New York; St. Louis; and Seattle, show occupational expectations very similar to those reported by Coxe and Bass for rural

schools, with the single exception of agriculture. (14: 82 and 4: 49.)

The extent of the curriculum offering of modern senior high schools which attempt to meet the vocational and avocational needs of their pupils is illustrated by a composite statement of the curricula of seventy-eight senior high schools in 1926 as shown in Table IV.

TABLE IV  
PROGRAM OF STUDIES FOR A SENIOR HIGH SCHOOL\*

TENTH GRADE		ELEVENTH GRADE		TWELFTH GRADE	
<i>Subject</i>	<i>Average Periods Per Wk.</i>	<i>Subject</i>	<i>Average Periods Per Wk.</i>	<i>Subject</i>	<i>Average Periods Per Wk.</i>
English	5	English	5	English	5
Foreign Lang. <sup>1</sup>	5	Foreign Lang. <sup>1</sup>	5	Foreign Lang. <sup>1</sup>	5
Industrial Arts <sup>1</sup>	5	Com. Studies <sup>1</sup>	5	Com. Studies <sup>1</sup>	4
Com. Studies <sup>1</sup>	5	Industrial Arts <sup>1</sup>	5	Industrial Arts <sup>1</sup>	5
Home Econom. (Cooking) <sup>1</sup>	5	Science (Physics) <sup>1</sup>	5	Science (Chemistry) <sup>1</sup>	5
Social Studies <sup>1</sup>	5	Home Econom. <sup>1</sup>	5	Social Studies <sup>1</sup>	2½
Science (Biol.) <sup>1</sup>	5	Social Studies <sup>1</sup>	5	Home Econom. <sup>1</sup>	5
Mathematics <sup>1</sup>	5	Mathematics <sup>1</sup>	2½	Mathematics <sup>1</sup>	2½
Music <sup>1</sup>	5	Art <sup>1</sup>	5	English <sup>1</sup>	5
Art <sup>1</sup>	5	Music <sup>1</sup>	5	Art <sup>1</sup>	5
		English <sup>1</sup>	5	Music <sup>1</sup>	5

<sup>1</sup>Variables.

\*Based on 78 representative senior high schools (20: 212).

If the agricultural subjects are added to the above program of studies, the typical program required by a comprehensive senior high school in rural areas will be obtained.

The typical senior high school found throughout the country is of the comprehensive type, that is, all curricula are offered under one organization. (24: 61.) This is the only practical type for rural areas and small cities. Three general plans are followed in grouping subjects: (28: 60.)

1. Parallel curricula with most subjects definitely prescribed when a given curriculum has been elected.

2. Core subjects (constants are required of all) with numerous variables (free electives).

3. Combination of (1) and (2) with definitely organized curricula, including certain required subjects and numerous electives.

## PUPIL-TEACHER RATIO

A third characteristic of a satisfactory school is a desirable numerical relationship between pupils and teachers. There has been considerable discussion and some experimentation to determine this numerical relationship. Experiments have been conducted showing that insofar as measurement of instructional results by standard tests is concerned small classes have no advantages over large classes. (57: 92-98.) Questions such as the effect of large classes on the physical and professional welfare of the teacher, and the effect on the social training and health of the pupils have not been answered. (9: 27-30.)

Practice in city school systems affords some guidance as to the number of pupils per teacher to be assumed in planning a modern school system. In cities there are sufficient pupils to make possible as large a number per teacher as appears consistent with desirable educational outcomes. Then, too, it is generally conceded that good schools are found more uniformly in cities than outside them. The following table taken from statistics published by the United States Office of Education shows the prevalent practice in cities of 10,000 population and over.

TABLE V

PUPIL-TEACHER RATIO IN CITIES OF 10,000 POPULATION AND MORE, BASED ON ENROLLMENT, 1922-1930\*

TYPE OF SCHOOL	1922	1924	1926	1928	1930
Elementary	37.2	39.0	37.6	37.0	37.1
Junior High School	28.9	28.9	29.0	28.7	28.6
High School	25.7	26.5	25.6	25.9	26.7

\*59:4.

There has been little change in the pupil-teacher ratio in city school systems since 1922. In the elementary school it has held close to 37; in the junior high school to 28; in the senior high school to 26. Such statistics, of course, do not take into consideration the size of classes in the various fields of

instruction. They are important only in determining the total number of teachers to be employed in a system.

Glass sets 33 as the maximum size class to be permitted in the junior high school. (33: 62.) Englehardt presents data showing that in a well-organized senior high school the number of pupils per teacher is 26 to 30. (28: 292.) The North Central Association of Colleges and Secondary Schools sets 25 as the desirable number of pupils per teacher and will not permit more than 30 in high schools belonging to that association. (51: 66.)

Pittinger reports on the size of high school classes as follows:

Irrespective of the total enrollment, graduates of high schools enrolling more than 20 and fewer than 31 pupils per teacher earn better marks in college than the graduates of schools enrolling 20 pupils or less, or more than 30 pupils per teacher. Within the limits of the study, therefore, the evidence favors the product of classes ranging from 21 to 30 pupils. (52: 110.)

It appears from available evidence that school systems can be safely planned to have the following pupil-teacher ratios based on enrollments:

1. For the elementary grades, 40 pupils per teacher;
2. For the junior high school grades, 30 to 35 pupils per teacher;
3. For the senior high school grades, 25 to 30 pupils per teacher;
4. For a six-year high school, 30 pupils per teacher.

#### ✓ THE SIZE OF A SATISFACTORY SCHOOL

There is much evidence that size of the student body is a determining factor in the efficiency of a school. The evidence, however, as to the minimum size of a satisfactory school is much more conclusive than the evidence as to the optimum size. For the purpose of this study the chief concern is the determination of the minimum size of school consistent with efficiency. Since schools are organized on the 6-3-3 or the 6-6 plan, the

size of elementary schools and of high schools will be considered separately.

— THE SIZE OF THE ELEMENTARY SCHOOL: A majority of studies concerning the size of elementary schools as related to efficiency have more or less arbitrarily classified schools having six or more teachers as large schools and all others as small schools. These studies have made comparisons between large and small schools as to age-grade and grade-progress status of pupils, achievement as measured by standardized tests, the training and experience of teachers, the length of school term, the breadth of the curriculum offering, the time allotment to various subjects, and the cost per pupil. The training and experience of teachers and the length of school term are probably closely related to age-grade status, grade-progress status, and achievement of pupils, and, hence, are not necessarily characteristic factors of small schools. Such factors as the breadth of the curriculum offering, time allotment to various subjects, the cost per pupil, and probably age-grade and grade-progress status and achievement of pupils are factors inseparable from the size of the school. Studies are in agreement that in all these factors the large school is superior.

As to age-grade and grade-progress status of pupils, "the larger the school and the larger the population in the community are, the younger are the children enrolled in corresponding grades." (41: 27.) The greatest differences occur in the second to sixth grades, indicating that the large and small schools are more nearly comparable as to age-grade and grade-progress status of pupils in the seventh and eighth grades. They are more nearly comparable only because the statistics as to age-grade and grade-progress include only those pupils who stay in school, and many more pupils are eliminated from small schools than from large schools. The only reason that greater over-ageness and slower progress does not appear in the small schools is that the pupils who have become retarded in the middle grades drop out of school before they reach the upper grades. This conclusion is substantiated by the fact that the smaller the school, the greater is the percentage of enrollment in the lower grades. (41: 51-2.)

In the matter of school achievement the pupils in the large schools have the advantage. Covert, in a study of educational achievements in one-teacher and in larger rural schools, shows that for eight states, viz., Indiana, Kansas, Kentucky, New York, Oklahoma, Texas, Virginia, and West Virginia, the pupils of the larger rural schools show superior achievement. (15: 19-20.) For example, in 51 comparisons in reading, the large schools excelled in 76.5 per cent of the instances; in 83 comparisons in arithmetic, the large schools excelled in 87.9 per cent of the instances; and in 31 comparisons in spelling, the large schools excelled in 80.6 per cent of the cases. Comparisons of the achievements of pupils in rural schools with those of pupils in city schools show similar results. Of course, it does not necessarily follow that the pupils in all small schools have a lower achievement rating than the pupils in the average large school. It may be added that the available data on achievement do not indicate that the mere factor of smallness of the school will prevent superior achievement when certain other factors are controlled or rectified. They do indicate, however, that in general the chances are against superior achievement in the small school. Evidently, there are certain factors operating against achievement which do not operate with equal force in the large school. (7: 194; 34: 7-8.)

Studies of time allotment to pupils and to classes in schools of various sizes show conclusively the advantage of elementary schools having six or more teachers. For example, a survey of the schools of Mercer County, West Virginia, showed that in the one-room schools of that county the average number of recitations per teacher per day was 27 with an average of 12 minutes per recitation; in two-room schools, 22 recitations with 15 minutes each; in three-room schools, 19 recitations with 17 minutes each; in four-room schools, 16 recitations with 20 minutes each; in six-room schools, 15 recitations with 22 minutes each; and in schools with eight or more rooms, 13 recitations with 25 minutes each. Thus the average teaching time per recitation in schools having six or more teachers is nearly twice as great as in schools having one or two teachers. (22: 32.)

Caswell has presented data showing the maximum time allotment to various subjects in one-teacher, two-teacher, and three-teacher elementary schools as compared with standard time allotments. (5: 42-52.) He shows the time allotments possible in these schools when combinations of classes have been made to reduce to a minimum the number of daily recitations to be conducted by the teacher. For example, in reading in the first grade the standard time allotment is 459 minutes per week, but the allotment in a one-teacher school can be only 165 minutes; in a two-teacher school, only 281 minutes; in a three-teacher school, only 360 minutes. After making what is thought to be the best possible combinations of grades and classes, the grand total instruction time that should be available in a one-teacher school is 4,483 minutes per week; in a two-teacher school, 5,196 minutes; and in a three-teacher school, 6,041 minutes. The maximum time that can be available with the best possible combinations of grades and subjects in a one-teacher school is 1,800 minutes per week; in a two-teacher school, 3,000 minutes; in a three-teacher school, 4,800 minutes.

On the basis of a careful study of the time allotments of fifteen states and forty large cities, and of the allotments recommended by recognized subject-matter experts, a state committee in Florida has set up the standard time allotments given in Table VI. If approximately 1,500 minutes per week constitute the teaching time of one teacher, and if grade and subject combinations are to be avoided, a minimum of six teachers, or one teacher per grade, will be required in a school that maintains the standard time allotment for all grades and classes.

Small schools of necessity are limited in the extent of curriculum offerings. This limitation results from the fact that there is not enough teaching time available to offer training in the fields of art, music, physical education, and many of the content subjects outside the "three R's". It is held by specialists in rural education that the curriculum offerings in rural elementary schools are usually formal and unrelated to the life of the child and organized upon the basis of subject-matter-to-be-learned. To what extent these conditions can be overcome in small schools is not at all certain. All that is now known is

TABLE VI

TIME ALLOTMENTS ADOPTED AS STANDARD FOR THE STATE OF FLORIDA\*

SUBJECT	MINUTES PER WEEK ALLOTTED TO EACH SUBJECT IN EACH GRADE						<i>Total Minutes in All Grades</i>
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>	
Reading and Language	500	400	400	300	300	250	2,150
Arithmetic		125	175	200	200	200	900
Writing	70	70	70	70	70	70	420
Spelling		75	75	75	75	75	375
Social Studies	200	200	200	300	300	300	1,500
Elementary Science	100	100	100	150	150	200	800
Art	125	125	125	125	125	125	750
Music	125	125	125	125	125	125	750
Health and Physical Education	300	300	300	300	300	300	1,800
Total	1,420	1,520	1,570	1,645	1,645	1,645	9,445

\*5: 28.

that they are much easier to overcome in large schools. (10: 256-61; 26: 97-123.)

✓ The cost per pupil, a measure of the efficiency of a school, is much greater in small schools than in large schools. This is unavoidable if the qualifications and salaries of teachers in small and large schools are equal and if a sufficient number of teachers are employed in each school to give standard instructional time in each grade and subject. ✓ In other words, it is obvious that if equal service is given to pupils in large and in small schools, the cost per pupil in the small schools will be the higher. However, the actual cost per pupil in small schools does not always exceed the cost in large schools because the available revenue per pupil for the support of small schools is usually much less than the revenue per pupil for large schools. In states that use considerable funds in equalizing teachers' salaries or that guarantee or require minimum salaries, the cost per pupil in small schools is usually much higher than in large schools. (45: 83; 58: 39.)

✓ The size of school at which the cost per pupil tends to reach a minimum has not been definitely determined. Available data indicate that the minimum cost per pupil for a given standard

of service tends to be reached in schools with enrollments beyond 200 pupils. The data in Table VII illustrate the point.

TABLE VII  
COST PER PUPIL IN ELEMENTARY SCHOOLS IN CALIFORNIA IN RELATION TO AVERAGE DAILY ATTENDANCE, 1923-24\*

AVERAGE DAILY ATTENDANCE	NUMBER OF SCHOOLS	TEACHERS' SALARIES	TOTAL OPERATING EXPENSES
1- 10	730	\$169	\$205
11- 20	703	90	117
21- 30	293	62	83
61- 70	76	55	80
191- 210	20	53	74
751-1000	2	46	56

\*35: 270.

An examination of the statistics of enrollment by grades in elementary schools in all states and in all types of communities reveals the fact that the enrollment and attendance in the first grade and frequently in the second grade constitute more than the proportionate percentage of pupils that would be in these grades if all pupils made equal progress in school. (60: 30.) This excess enrollment in the first two grades makes it difficult to assign one teacher to the grade, or the same number of teachers to each grade in a school that has more than one teacher. A six-grade school, therefore, would have an enrollment which would require at least seven teachers to prevent overcrowding in the lower grades. Accepting the pupil-teacher ratio of about forty enrolled pupils per teacher, the elementary school should, therefore, have a minimum of approximately 240 to 280 enrolled pupils.

THE SIZE OF A SATISFACTORY HIGH SCHOOL: Expert opinion is almost unanimous in condemning the small high school because of its numerous shortcomings. Some of these limitations, it is true, can be overcome by proper administration and capable teachers, but many cannot be overcome at all within reasonable limits of cost. The shortcomings and limitations that seem to be inherent are those pertaining to the curriculum offering and the cost per pupil. (56: 307.)

In considering the curriculum offering of the high school, it should be kept in mind that the people of the United States have embarked upon a program of universal secondary education. Such a program implies that such opportunities should be provided as are required by the varied life purposes of all individuals of secondary school age and by the need of society for varied training among its members. There is ample evidence that small schools are not able to provide curricula to serve these ends.

Combs presents significant evidence concerning the effect of the size of the high school on the curriculum offering. He states three propositions which are substantiated by the data he submits:

1. It is difficult to secure teachers qualified to offer instruction in a sufficient number of fields to carry out a comprehensive program of studies in a three-teacher high school.

2. In cases where properly qualified teachers can be secured, even with alternations and combinations the teaching load would exceed the maximum permitted by State and National accrediting agencies.

3. When a sufficient number of teachers are employed and proper equipment added to provide adequately for the introduction of vocational courses such as agriculture, home economics, commerce or industry, the per pupil cost becomes prohibitive in the small high school. (13: 60.)

✓ Ferriss has summarized the status of the small high school as follows:

All data on the programs of studies offered and the requirements for graduation from the rural high school indicate, in general, that in practice at least, if not in theory, it is still a selective institution rather than an institution serving equally the educational needs of all the children of high school age. The bulk of its curriculum offerings and its requirements are based upon the needs of a special group of pupils. In a large measure it is attempting to fit all pupils to the same educational mold. (29: 50.)

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In order to determine a desirable size of high school, an acceptable curriculum offering must be defined. The extent of the offerings and the subject-matter fields that should be included in an acceptable junior or senior high school curriculum have been presented in a foregoing discussion. The size of the school required to present economically such a curriculum can be deduced from an analysis of the curriculum in terms of teaching positions. It is also desirable to have some standard as to the number of subject-matter fields in which any one teacher can be expected to teach. Such a standard is reflected in many of the more recent regulations concerning the administration and classification of high schools by state departments of education and by accrediting associations. These regulations indicate that a high school teacher should not be expected nor required to teach in more than two fields and that these fields should be as closely related as possible. (4: 122.)

The curriculum necessary for a complete and comprehensive high school has been analyzed in terms of teaching positions by Bachman as follows: (4: 122).

1. English and Latin or German or French.
2. Social Studies and a second optional related field.
3. Mathematics and Science.
4. Home Economics.
5. Agriculture.
6. Commercial Education.
7. Trade Training.
8. Music.
9. Art.
10. Health and Physical Education.

It will be seen from this analysis that ten is the minimum number of teachers required for an acceptable high school whether it is a junior, a senior, or a six-year high school. Perhaps the only modification that could be justified in this arrangement would be the assigning of the fields of music, art, health, and physical education to other members of the staff. Such an arrangement would call for an absolute minimum of seven teachers.

Studies of the relationship between the size of the high school and the cost per pupil are unanimous in agreement that the smaller the high school the higher the cost per pupil enrolled or in attendance. Of course, it is possible to find some small high schools in which the cost is less than in some large schools, but in all states where studies of high schools over large areas have been made it has been found that the smaller the school the higher the cost. Published studies from Virginia (13: 55), Illinois (54: 110-11), California (19: 168-70; 31: 232-4), New York (38: 63), Arizona (3: 114), Massachusetts (37: 63-8) and Minnesota (61) show this relationship.

There is some evidence as to just how large a high school must be before the cost per pupil ceases to increase. In general, the cost per pupil tends to increase rapidly in schools under 200 in enrollment and the change in cost after the 200 enrollment is reached is not material. There is considerable evidence that high schools having enrollments of 500 to 600 pupils offer more courses, provide more activities and cost less per pupil than smaller schools. These schools of 500 to 600 pupils, moreover, offer about the same number of courses and provide about the same activities and cost about the same amount per pupil as do schools with larger enrollment. (43: 356-64.)

The evidence as to the size of high school required to offer a sufficiently wide curriculum to meet economically the needs of the school population indicates that the absolute minimum size high school should have seven teaching positions and the desirable minimum should have ten teaching positions. In terms of the standard pupil-teacher ratios shown previously, a six-year high school would have an absolute minimum of approximately 210 enrolled pupils and a desirable minimum of approximately 300 enrolled pupils. In the same manner it is to be concluded that a three-year junior high school should have from 245 to 350 pupils, and a three-year senior high school from 175 to 250 pupils. It should be observed that in any case about 200 pupils is approximately the minimum number to constitute a satisfactory high school. There is no conclusive evidence as to the optimum size of high school, but there is evidence that insofar as the curriculum offering and the cost per pupil are concerned there is little if anything gained by

having a high school of more than 600 pupils and twenty teachers.

#### THE TRANSPORTATION OF PUPILS

Transportation must be provided for children wherever the establishment of schools of the minimum size requires a school to serve an area of such size that the homes of some children are not within walking distance of the school building. It is obvious that children who live too far from school to walk conveniently are not on a basis of equality of educational opportunity when compared to those children who live close enough to walk. In order to overcome this inequality it is now widely accepted that transportation should be furnished at public expense to those pupils who need it.

It is sometimes held that the parents should furnish transportation. Many parents, however, are not financially able to pay for the transportation of their children, and the principle of equality of opportunity requires that a child's opportunity to attend school should not be dependent upon the financial status of his parents. Transportation of pupils at public expense is a legitimate part of the cost to the state and its subdivisions of providing educational opportunities commensurate with the needs of the school population and of society. In addition, since the state compels attendance at school it necessarily follows that the conditions of attendance must be made reasonable.

There is considerable scientific evidence that distance affects school attendance and that the transportation of pupils at public expense does overcome the disadvantages of distance from school and increases school attendance. For example, Reavis has shown that in areas where transportation is not provided attendance drops off rapidly when children live more than one and a half miles from school, and Cooper has shown that in Delaware attendance drops off extensively after a mile and considerably after the first half-mile. (12: 58.) On the other hand, Gaumnitz and Cook (12: 52-67) have presented data for five states, viz., Colorado, California, Wisconsin, Kentucky, and Iowa, which show that the attendance of children living stated distances from school and transported at public

expense is better than the attendance of children living equal distances from school and not transported.

TABLE VIII

COMPARISON OF ATTENDANCE OF NON-TRANSPORTED AND OF TRANSPORTED CHILDREN LIVING STATED DISTANCES FROM SCHOOL\*

DISTANCE	MEDIAN DAYS ATTENDED	PERCENTAGE ATTENDING	
		<i>70 days or fewer</i>	<i>151 days or more</i>
<b>NON-TRANSPORTED PUPILS</b>			
Less than 1 mile	157	12	61
1 to 2 miles	145	17	46
2 to 3 miles	143	19	45
3 to 4 miles	155	13	57
4 miles or more	164	6	72
<b>TRANSPORTED PUPILS</b>			
Less than 2 miles	163	7	69
2 to 4 miles	160	10	65
4 to 6 miles	158	9	63
6 to 8 miles	155	11	57
8 to 10 miles	158	6	69
10 miles or more	157	16	69

\*Derived from Tables III and IV of "Availability of Rural Schools" by Cook and Gaumnitz, 12: 62-7.

An examination of the data which are presented in Table VIII shows that the average days attended by the transported group are greater than the average days attended by the non-transported group; that in all cases except the greatest distances the percentage of pupils attending less than seventy days is greater for the non-transported group than for the transported group; and that percentages of pupils attending more than 150 days is greater in all cases except the greatest distances for the transported group than for the non-transported group. The superior attendance of the pupils living the greatest distances is probably accounted for by the fact that the majority of the pupils coming from the greatest distances are in the upper age groups. Cook summarizes these data as follows: "Comparison of data in Table III with those in Table IV shows that when children are transported at public expense their attendance is better than when they walk or must be transported at their own expense." (12: 70.)

Since children are to be transported to school, the question naturally arises as to what distance they can be transported

conveniently. Some idea of this distance can be obtained from the available data as to the distances children actually are transported. In North Carolina, the state that transports more children than any other, there are 4,240 buses that travel an average of approximately fourteen miles one way per day. (50: Vol. VIII, No. 9.) Evans has shown that in California 4.2 per cent of the children transported to school are transported more than ten miles; 35 per cent of the high school pupils transported by contract buses are transported more than ten miles, and 23.9 per cent of the high school pupils transported by district-owned buses are transported more than ten miles. (27: 9.) Abel, in a study of 260 consolidated schools, found that 9 per cent of the pupils are transported more than eleven miles, the maximum being nineteen miles, and the maximum number of minutes on the road being 100 minutes. (2: 38.)

It seems probable that the best means of determining the maximum distance children can be conveniently transported to school is to be found in a consideration of the maximum time children should be expected to spend on the road. Although no study has been made to determine what the maximum time should be, whenever standards have been set up, the most commonly agreed maximum time is one hour from home to school. (42: 9.) This time limit, taking into consideration the speed of the bus traveling at a safe rate and stopping to load and unload pupils, would usually place the maximum distance at approximately twenty miles. It should be observed here that this time limit on the transportation of pupils will have, in some cases, a limiting effect on the size of the school and the attendance unit. If, when attendance units are planned, it is found that the size of the unit will require the pupils to be on the road too long a time, it may be necessary to plan for units of less than standard size.

If schools of the minimum standard size are to be established and transportation provided, what is the maximum expectation as to the percentage of pupils to be transported? The exact answer to this question for any specific situation, of course, would have to be determined by an analysis of the facts for the particular situation. However, the data for states and areas where transportation is required indicate the most probable per-

centage of pupils that will have to be transported. In North Carolina, where all children living more than one and one-half miles from school are transported at public expense, approximately 50 per cent of the rural white school children are transported at public expense. (50: Vol. VIII, No. 9.) From a state-wide study of Arkansas, where plans were made for the consolidation of schools in every area of the state, and for the transportation of all pupils living more than two miles from school, the data showed that approximately 46 per cent of all pupils outside the seven largest cities would have to be transported to school. (23: 40-5.) In Pulaski County, Arkansas, 50.4 per cent of all pupils are transported. In this county the rural schools for white children are almost completely consolidated into schools of standard size, the areas accommodated by the consolidated schools have no towns or cities, and all pupils living more than one and one-half miles from school are transported at public expense. (21: 16 and 104.) Abel, in a study of 212 consolidations in 1924, showed that 43 per cent of all pupils were transported and that in open country consolidated schools 66 per cent of the pupils were transported. (2: 39.) In short, the available data indicate that the consolidation of rural schools in any typical area throughout the country will require transportation for at least 50 per cent of the pupils. (1: 8.)

#### THE SCHOOL BUILDING, EQUIPMENT AND APPARATUS

Another requirement of a satisfactory school is that it be housed in an adequate plant. It is now generally agreed that every child has a right to attend school in a building that represents the best in architectural design; that is located in a healthful and pleasing environment; that is scientifically built and equipped; that is planned and designed from the functional point of view so as best to promote the physical, moral, and social welfare of the pupils and teachers, and to facilitate carrying out the program of the school; and that is kept sanitary.

The standards for the school plant, including heating, ventilation, lighting, orientation, color schemes, convenience of arrangement, economy of space, sanitary facilities, safety, and

construction, are very definite and are based upon scientific research. The standards can be obtained from the American Council on Schoolhouse Construction, Milwaukee, and from such publications as *Rural Schoolhouses, School Grounds and Equipment*, by Dresslar and Pruett. (25.)

Standards that are most essential and that surveys of school buildings have revealed to be most frequently neglected relate to location, orientation, lighting, heating and ventilation, toilet rooms, safety, room appointments, functional planning, expansion and additions, grounds, and equipment and apparatus.

#### OPERATION OF THE SCHOOL PLANT

Not only is it necessary to have an adequate school plant and equipment but it is equally essential that the plant and equipment be properly cared for and operated.

The amount of janitorial service required for the proper operation of the school plant can be determined from published studies on the subject. Reeves and Gander report that in Cuyahoga County, Ohio, it was found that the average janitor takes care of about nine classrooms, and that in the Rocky Mountain region the janitor takes care of an average of eight rooms. The floor area cared for by a single janitor ranged from 4,000 square feet to 19,920 square feet, with a median of 10,000 square feet. They further report that in seventy unselected schools distributed over the United States the average number of square feet per janitor-engineer was 17,300, that in 170 unselected schools the average number of pupils per janitor-engineer was 313; and that for 136 unselected schools the average number of rooms per janitor-engineer was ten. (55: 28.) These statistics give some idea as to the amount of floor space one janitor may be expected to care for. Many factors, however, enter into a determination of the service load in various situations. Such factors as the efficiency of the administration of the building, the size, age, state of repair, and location of the building, type of structure, climatic conditions, age, social background, and number of pupils, type of rooms and furniture, type and amount of window space, system of heating, kind of service equipment, and amount and arrangement of outside space, all influence the service load of the janitor-engineer. (55: 23-30.) As a gen-

eral rule, it may be concluded that one janitor-engineer will be required for approximately each 10,000 square feet of floor space, which is approximately the size of a minimum standard school.

#### TEXTBOOKS, INSTRUCTIONAL SUPPLIES, AND LIBRARY SERVICE

In a satisfactory school the pupils will be provided with textbooks, adequate instructional supplies and apparatus, and with library facilities. Judging from the literature on the subject, it is difficult to describe these materials and facilities in definite terms. It is generally agreed, however, that it is poor economy to have trained teachers and then to neglect to provide them with the materials and supplies that have been proved useful to effective instruction. (28: 433.) It is also agreed that since compulsory attendance laws compel children to attend school, the state should not leave it to chance as to whether these children will have necessary books and materials for instruction. For this reason textbooks and instructional materials should be furnished at public expense. (28: 434.)

Since the broadened curricula of the schools make increasing demands upon printed and visual materials, the school library has become an indispensable part of a satisfactory school organization. Not only should every school building be planned in such a way as to provide adequate library space, but every school system should either maintain a central school library or should have direct affiliation with and a voice in the management of a public library.

There are no well-defined standards as to adequate library facilities for elementary and high schools. Frost states that a class of graduate students estimated that a single group of forty children, progressing from the first grade through high school, could use profitably some 8,000 to 10,000 different books. (31: 312.) Johnson, in *The Secondary School Library*, concludes: "In general, it may be said that the standards are in agreement that no library, no matter how small the school, should have fewer than 500 books and that schools with as many as 200 pupils should have a minimum of 1,000 books." (40: 15.)

As to provisions for the personnel to administer the library, the official report of the committee on library organization and equipment, National Education Association, 1920, has made the recommendations indicated in Table IX. From this table it is to be concluded that a minimum standard school as previously described in this chapter should have the services of at least one trained librarian.

TABLE IX  
TRAINED LIBRARIAN SERVICE ESSENTIAL IN SCHOOLS\*

ENROLLMENT	NUMBER OF LIBRARIANS
Less than 250	Half-time
250 to 500	One
500 to 1000	One; or one and one on half-time
1000 to 2000	Two
Over 2000	Two; or two and one on half-time

\*28: 411.

It may be concluded that the minimum library facilities available in any school should be the use of a central library available to all schools of the administrative unit and an individual library of its own under the care of a clerk who is supervised by the trained librarian of the central library.

#### TEACHERS

Undoubtedly, the most fundamental characteristic of a satisfactory school is that it provide instruction and guidance by teachers and principals who are specifically trained to fulfill the responsibilities of the positions they hold. (58: 500, 516-18.) The minimum amount of such training generally required is indicated by the standards set up by state departments of education and by city school systems. Such standards require the following:

1. All classroom teachers in elementary schools should have at least two years of professional training beyond graduation from a complete high school course.

2. All elementary school principals should have at least three years of teaching experience in addition to the minimum training for teachers.

3. All high school teachers should have at least four years of college training, including specific training in the respective fields in which they are to teach, the fields usually being limited to a maximum of two for any teacher.

4. High school principals should have at least one year of professional training on the graduate level and three years of experience as a high school teacher. (4: 347-9; 57: 76-82.)

#### LENGTH OF SCHOOL TERM

A satisfactory school should offer instruction during a sufficient number of weeks each year to accomplish the purposes of the school. In cities of 2,500 and more, the minimum standard is thirty-six weeks per year, the average being 184 days in 1930. In rural schools, taking the nation as a whole, the length of school term has tended to exceed eight months or thirty-two weeks per year. The average lengths of terms in different kinds of rural schools in 1930 were: one-teacher schools, 156 days; schools of three or more teachers in the open country, 163 days; consolidated schools, 168 days; schools of three or more teachers in villages and towns, 174 days. (32: 65.) In the light of practice in our best school systems it can be set up as a minimum standard that schools should be in session at least thirty-six weeks or nine months per year.

#### SUMMARY

The first and chief function of a local school unit is to maintain such free school facilities as will best carry out the major purposes of public education. These major purposes are the improvement of the economic, political, social, and individual welfare of the nation and its people. The characteristics of public schools that will contribute to the most effective realization of these major purposes have been determined by analysis of existing conditions, research findings, and expert opinion.

Elementary schools should:

1. Offer six years of instruction;
2. Have a desirable minimum of seven teachers or an absolute minimum of six teachers;
3. Have an average of approximately forty enrolled pupils per teacher;
4. Have, therefore, approximately a minimum of 240 to 280 pupils per school.

High schools should:

1. Offer six years of instruction, or three years of junior high school instruction and three years of senior high school instruction under separate organizations;
2. Have a desirable minimum of ten teachers or an absolute minimum of seven teachers;
3. Have an average of approximately thirty pupils per teacher in a six-year high school, thirty-five pupils per teacher in a junior high school, or twenty-five pupils per teacher in a senior high school;
4. Have, therefore, approximately a minimum of 210 to 300 pupils in a six-year high school, 245 to 350 pupils in a junior high school, and 175 to 350 pupils in a senior high school.

All schools should be housed in plants that are consistent with acceptable standards, that are properly and efficiently operated, and are equipped with textbooks, instructional materials, and library facilities. Schools should be in session for at least thirty-six weeks per year.

In all cases where schools of the desirable size have been located at too great a distance for the pupils to walk to school conveniently from their homes, transportation facilities at public expense should be provided for all children who live more than one and one-half miles from the school.

These standards as to satisfactory schools have direct bearing on the determination of local attendance or school units. The minimum standard size of satisfactory attendance units are:

1. For elementary schools, an area in which reside at least 240 pupils enrolled in elementary school grades;

2. For a six-year high school, an area in which reside at least 210 pupils enrolled in high school grades;
3. For a junior high school, an area in which reside at least 245 pupils enrolled in the junior high school grades;
4. For a senior high school, an area in which reside at least 175 pupils enrolled in the senior high school grades.

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## CHAPTER III

### SATISFACTORY ADMINISTRATIVE AND SUPERVISORY ORGANIZATIONS

In addition to providing adequate attendance areas with satisfactory schools, a local unit of school administration must perform certain administrative and supervisory functions. These administrative and supervisory functions can be determined by a consideration of practices in good school systems and by a study of expert opinion. It is generally recognized that city school systems (especially those in cities having a population of 10,000 or more) and some county school systems offer the most generally acceptable school advantages and have the best developed supervisory and administrative organizations. The administrative and supervisory functions performed in such school systems are classified as: (11: 20)

1. Educational and business administration.
2. Supervision of instruction.
3. Health supervision.
4. Census and attendance supervision.

In order to perform these functions satisfactorily, adequate personnel must be provided. The number of persons required, and the services to be rendered are set forth in this chapter.

#### ORGANIZATION FOR EDUCATIONAL AND BUSINESS ADMINISTRATION

**THE SCHOOL BOARD:** As pointed out previously, local school units are administered by a school board that derives authority from the state through laws enacted by the legislature. The school board is, therefore, the agency created by the state to

supervise the effort to attain the educational purposes and objectives of the state in the respective local school units of the state. These boards are usually granted broad powers in the management of educational and business affairs of local school units. In all cases, however, they are subject to such controls and limitations as are imposed by state law. (1: 8-10; 5: Chapter II.)

In general, a school board consists of five, seven, or nine members, elected by the people and serving overlapping terms. The length of term usually depends upon the number of members on the board. For example, on a board of five members one member would be elected each year for a five-year term. Various other arrangements may be used for boards of seven or nine members. Whatever the plan, it should provide that less than a majority of the board be elected each year or at each election. (5: 57-68.)

It is generally agreed that the work of a board of education should be legislative, and that the administrative work should be delegated to an executive officer known as the superintendent. In his study, *The City Superintendent and the Board of Education*, Theisen presents the following conclusions concerning the work of the board of education: (16: 125-26)

1. That a board of education should endeavor to discover its own proper duties and those that should be delegated to professional executive officers.

2. That its own function is first of all:

- (a) To choose a professionally trained chief executive, centralize authority and responsibility for results in him and expect him to initiate all policies;

- (b) To debate such proposed policies with him in the light of definite objective evidence and to provide the legislation necessary to secure efficient results.

3. That a board of education need wait for no precedent to adopt a form of administrative organization in which the professional superintendent is made the administrative leader and chief executive of the system, and in which the board itself serves in an advisory and legislative capacity and acts only through its chief executive.

Olsen concludes that the work of boards of education is three-fold : (1) to select a superintendent of schools; (2) to determine the policies of the school system; and (3) to see that these policies are carried out by the superintendent of schools and his assistants. (14.)

With respect to their fiscal powers, school boards are classified as independent and dependent boards. The independent board draws all its authority from state laws and is entirely independent of all local units of government. Such a board can levy taxes, subject to the limitations of state laws, and can spend its income in accordance with its own policies. The dependent board draws its authority under state law from some local unit of government such as the county, city, or township. Thus, such a board is dependent for financial support of schools upon officials of local units of government other than the school district. There is some disagreement as to which of these types is the better. Authorities on school administration are almost unanimously in favor of the independent board, while authorities on municipal government are largely in favor of dependent boards. Available evidence as to which type of board provides the better schools is almost wholly in favor of the independent board. (1: 35-42; 8-10.)

There are four general types of organization of boards of education: (11: 19)

1. The *Unit* type, in which the superintendent of schools is the sole executive officer of the board, and the board always acts as a whole and not by committees.

2. The *Multiple* type, in which there are two or more executive officers directly responsible to the board of education.

3. The *Board of Education-Municipal Department* type, in which the control of some part or parts of the educational program is vested in a board or official not responsible to the board of education.

4. The *Board of Education Committee* type, in which some phases of the executive work are done by the board of education through standing committees.

The Unit type is accepted by authorities in the field of school administration as the most satisfactory because it em-

bodies the advantages of sound business organization and makes it more certain that the school system will be administered for educational purposes. (1: 45-57; 11: 19.)

THE SUPERINTENDENT OF SCHOOLS: As indicated above, the superintendent of schools should be the chief executive officer of the board of education and the general manager of the school system. Most of his powers are delegated to him by the board of education, but some of them may be delegated by state law. A definition of these powers, as agreed upon by authorities in the field of school administrations, is presented in the conclusions of the study by Douglass on *The Status of the Superintendent*: (3 cited in 11: 12)

(a) All the educational activities of the city should be centered in the office of the superintendent of schools. (b) The administrative work of the superintendent should be based upon principles of business administration. Certain authorities should be delegated to competent subordinates. (c) The superintendent should have power to initiate and execute the appointments of assistant superintendents, business managers, principals, teachers, and all other employees whose work is vital in the development of an educational program. (d) The budget should be prepared under the direction of the superintendent. (e) The superintendent should have power to initiate new policies and to make rules and regulations governing routine matters. (f) Supervision of instruction should be carried on through supervisors and principals under the leadership of the superintendent. . . . (i) Authorities having to do with buildings and grounds should center in the office of the superintendent of schools, or in the office of an official who is responsible to the superintendent.

#### SUPERVISION OF INSTRUCTION

It is a function of the local unit of school administration to provide for the supervision of instruction. It has been shown by careful experimentation and study that supervision improves the services of teachers and helps in the achievement of desirable educational outcomes. In addition, it is financially economical and reduces pupil failures. (15.) For these reasons

the provision for supervision by local school units is recommended by educational authorities and is found in a large majority of the best city and county school systems.

The number of persons required to provide adequate supervision of instruction depends upon the instructional program offered in a given school system. Instructional programs of city school systems and supervisory staffs required for such programs provide one basis for determining the personnel required for supervision. McGinnis has analyzed the supervisory work found in 185 cities of 20,000 to 50,000 population and concludes that the minimum number of supervisors consistent with desirable practice is ten. These ten supervisors are distributed among the following positions: One general supervisor, a director of research, a supervisor of atypical classes, one supervisor each for art, music, health, manual arts, household arts, and two for physical education. (11: 65-66.)

An important auxiliary service to the instructional program which is not provided by the foregoing list of supervisors is that of library service and supervision. The school library has become a necessary unit of a modern school system. Around it rotates much of the work carried on in the schools. Each school system should maintain its own central library under the supervision of a trained librarian who should also be the director of libraries in the individual schools. Under this plan libraries in individual schools can draw upon the central library for books. In this way the widest possible use can be made of all library facilities. Thus, it becomes desirable to include a librarian in the central organization for supervision. (5: 403-10; 9: Chapter II; 7: Chapters I and II.)

The number of supervisors provided in a school system will of course be conditioned by the number of teachers in the system. The smaller the number of teachers the smaller the number of supervisors that can be employed economically. In order to reduce the number of supervisors in smaller systems the practice is to assign to one person two or more specialized supervisory functions. Either this practice must be adopted or certain specialized supervisory services must be omitted.

A study of the actual number of teachers per supervisor found in cities and in county school systems suggests a numeri-

cal relationship between teachers and supervisors that may be considered efficient and economical. McGinnis in his study shows that in 185 cities there was an average of thirty-six teachers per supervisor; in 163 cities, forty-six teachers; and in twenty-two Massachusetts cities, twenty-seven teachers. (11: Chapter X.) In Maryland, a state which is organized with the county as the local unit of administration, the state standards require an average of one supervisor or helping teacher to each forty-six elementary teachers. In 1930-31, in Maryland counties an average of one supervisor to each sixty elementary teaching positions was employed. (12: 89.) According to data presented by the Research Division of the National Education Association, an acceptable standard is one supervisor to each fifty elementary teachers. (13: 295-300.) The number of supervisors in high schools would certainly not be less in proportion to the number of teachers than the number of supervisors in elementary schools. Due to the increased number of specialized fields for which provision must be made, the number might be greater. From these data it may be concluded that there should be at least one supervisor for each forty to fifty teachers.

#### HEALTH SUPERVISION

Adequate provision for maintaining and improving the health of pupils is placed first in most lists of objectives of public education. The need for specialized services to attain the objectives of good health for all pupils has been demonstrated in many health surveys. Practically all the surveys which have been made of the health of school children have revealed that about 60 per cent of the children have defects in eyes, ears, nose, throat, lungs, heart, teeth, or suffer from faulty nutrition. Cubberley suggests the importance of health work and instruction in the modern public school system as follows:

Such a department should be one of the principal departments of a city school system. . . . The work represents a new technical field, requires expert direction, and the expertness of the department should be respected in its administration. Only to the superintendent of schools, as the

coordinating head of the whole school organization, should the department be subject and responsible. Under the director of this department should be the physicians, specialists, and nurses employed, and he should direct their work. (2: Chapter XX.)

The work of health education usually is done through the following divisions of service: (11: 23)

1. Administration of the educational health department.
2. Pupils' health examination.
3. Health instruction:
  - a. The learning process.
  - b. Physical education and games.
4. Supervision of health instruction.
5. Follow-up work.

The number of persons required to do the health work in a school system may be estimated from standards developed by authorities on the problem. The Division of Field Studies, Institute of Educational Research, Teachers College, Columbia University, has set up the standard of one health nurse for from 1,200 to 1,500 pupils. McGinnis found that in 163 cities there was an average of one nurse to 2,643 pupils, and that in twenty-two Massachusetts cities there was an average of one nurse to 2,331 pupils. He concludes that the number of pupils per nurse in these cities is too high. (11: 66.) Judging from available data on the number of health nurses and supervisors that should be employed, it appears reasonable to conclude that the minimum standard should be at least one nurse to each 2,000 children and at least one supervisor of health education for the school system. (17: 179.)

#### CENSUS AND ATTENDANCE SUPERVISION

It is a function of the state to see that all children obtain the educational advantages which are provided. Practically every state, therefore, has a compulsory school attendance law, requiring all children within certain age limits to attend school, for stipulated lengths of time. The general tendency is to require the attendance of all persons between the ages of six and

eighteen years who have not completed a twelve-year course of instruction, except those who are physically or mentally incapacitated and those who have been granted permission by a constituted legal authority to engage in some regular employment or business. In order to carry out the provisions of the compulsory laws and regulations it is an accepted function of the local unit of school administration to provide supervisors or officers of attendance. The work ordinarily required of attendance supervisors involves keeping a permanent and continuous census; enforcement of the compulsory attendance law; investigation of non-attendance; prescription of remedial measures in cases of non-attendance; issuance of permits for minors to be employed in business or industry; and such inspection of the conditions of minors' work as will prevent injury to their health and morals. (11: 21.)

Several studies have been made which undertake to establish standards as to the ratio between the number of attendance supervisors or officers and the number of pupils to be served. Emmons (4) recommends the Philadelphia plan of one attendance supervisor for 2,500 to 4,000 census children of school age, and the Engelhardt-Evenden standard of one attendance officer and one clerk to 6,000 children. (6.) McGinnis has shown that in 185 cities of 20,000 to 50,000 population there is an average of one attendance officer to 4,266 enrolled pupils. (11: 50-67.) These standards and data seem to justify the conclusion that one attendance supervisor or officer and one clerk for not more than each 6,000 children constitute the minimum acceptable standard for the number of attendance employees in the central organization of a local administrative school unit.

#### ADMINISTRATIVE AND SUPERVISORY ORGANIZATION

From the foregoing analysis of the educational and business administration of a school system, the supervision of instruction, of health education, and of census and attendance, it can be concluded that the minimum number of persons necessary to perform most effectively the functions named would be as follows:

- 1 superintendent
- 1 clerk for superintendent
- 1 business manager
- 1 bookkeeper and clerk for business manager
- 1 supervisor of buildings and grounds
- 2 attendance officers
- 2 clerks for attendance officers
- 6 nurses
- 2 clerks for nurses
- 1 librarian
- 1 general supervisor
- 1 director of research
- 1 supervisor of atypical classes
- 1 supervisor of music
- 1 supervisor of art and writing
- 1 supervisor of health
- 1 supervisor of manual arts and vocational subjects
- 1 supervisor of household arts
- 2 supervisors of physical education
- 3 clerks for supervisors
- Total employees for central organization—31

This distribution of personnel was determined in the following manner. Since the provision of ten supervisors represents the minimum for desirable practice, and since there is approximately one supervisor to each thirty-five teachers, the minimum desirable supervisory organization would provide for a maximum of 7,000 elementary pupils and 5,250 high school pupils or a total of approximately 12,000 pupils. This is assuming that the schools are organized on the basis of the 6-6 or 6-3-3 plan. On the basis of acceptable standards for the number of pupils per attendance officer and per nurse, such an organization would call for two attendance officers and six nurses. The number of clerks provided for the nurses and the attendance officers is somewhat arbitrary, since no definite standards are available. An administrative unit involving as many as 12,000 pupils should probably have a business manager who would supervise the maintenance and operation of buildings, the purchase, storage, and distribution of supplies, and the bookkeep-

ing, cost accounting, and payrolls. There should also be one supervisor of buildings and grounds or at least one head janitor and repairman.

The type of organization under which these officials would work is shown in Chart I.

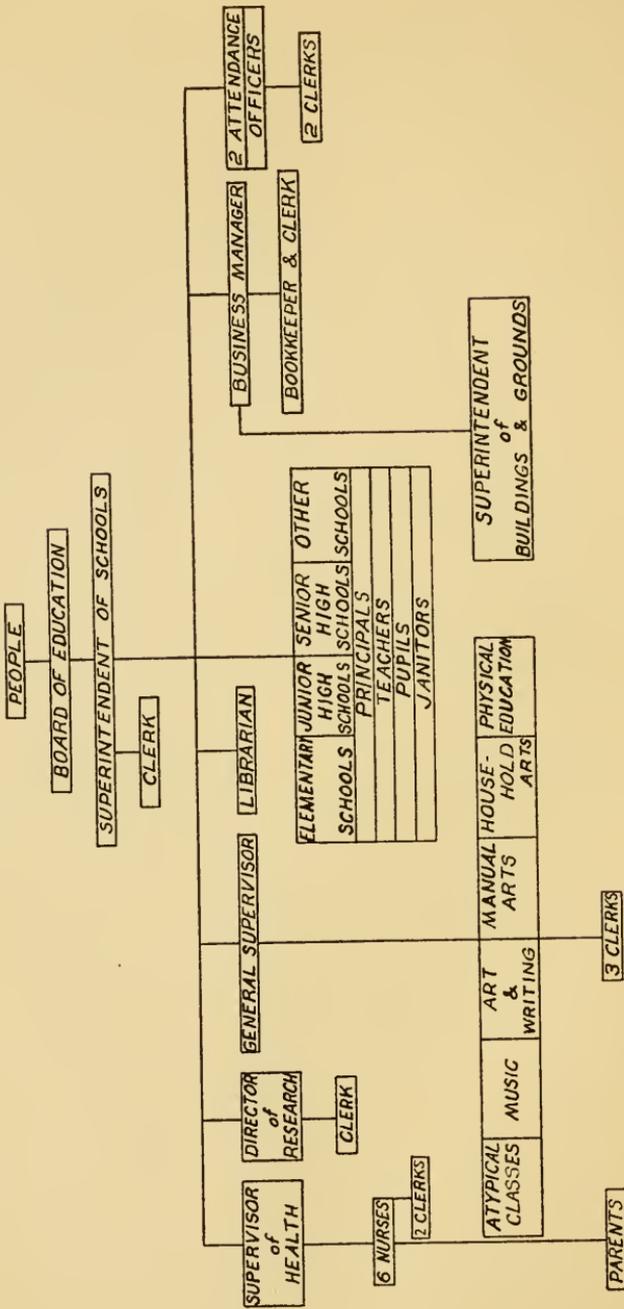
MODIFICATIONS OF A STANDARD ORGANIZATION FOR ADMINISTRATION AND SUPERVISORY SERVICE

The standard organization for administration and supervision set up in the preceding pages is designed to meet the needs of approximately 10,000 or 12,000 pupils. A school system of such size would be supported by a total population of 40,000 or 50,000. It is not likely that administrative units of this size can be organized throughout the country. Therefore, it is necessary to consider feasible modifications in the size of the central organization. Two modifications appear to be compatible with a reasonable standard of service. These are not the only possible modifications, but they represent approximately the median and maximum modifications found in acceptable practice and serve to point out the underlying conditions which determine the size of a satisfactory local school unit.

**MEDIAN MODIFICATION:** The median downward revision of the standard organization includes the following positions and personnel:

- 1 superintendent
- 1 clerk for superintendent
- 1 bookkeeper and business assistant to superintendent
- 1 attendance officer
- 1 clerk for attendance officer
- 1 clerk for nurses
- 1 head janitor and repairman
- 1 librarian
- 2 elementary school supervisors
- 1 secondary school supervisor
- 1 vocational education supervisor
- 2 clerks for supervisors
- 3 health nurses
- Total of 17 persons in central organization

CHART I  
 THE ORGANIZATION OF A COMPLETE ADMINISTRATIVE AND SUPERVISORY STAFF OF THIRTY-ONE PERSONS FOR A LOCAL ADMINISTRATIVE SCHOOL UNIT



A comparison of the number of positions and persons provided by this plan with the standard ratios will show that the proposed organization will economically care for about 6,000 pupils. Such an organization provides for all of the functions of (1) educational and business administration; (2) supervision of instruction; (3) health supervision; and (4) census and attendance supervision. Supervision in the special subjects such as music, art, and physical education are secured by utilizing the services of teachers and principals with special training in these fields. Such services must be coordinated by the regular supervisory staff. (5: Chapter XII.) A similar procedure can be followed in the academic and vocational subjects of the high school, and for extra-curricular activities. A diagram of this arrangement for administration is presented in Chart II.

MAXIMUM MODIFICATION: The maximum modification is reached by assuming that the functions of business administration and of instructional supervision can be performed by the superintendent and that attendance and health work can be performed by one person.<sup>1</sup> Such central organization would be about as follows:

- 1 superintendent
- 1 bookkeeper and clerk for superintendent
- 1 nurse-attendance officer
- 1 clerk for nurse-attendance officer

On the basis of one nurse to each 2,000 pupils and one attendance officer and clerk to each 6,000 pupils it seems that such an organization should not be expected to care for more than 1,750 pupils or fifty teaching units. The superintendent will act as the executive officer of the board, the business administrator of the school system and the coordinator of the activities of the persons employed in the school system. The supervision of instruction will be performed by the principals who utilize the services of teachers specially trained in the various fields. Diagrams of possible plans of administration and supervision are shown in Chart III and Chart IV.

<sup>1</sup>Such an arrangement is recommended by Dr. Fred Engelhardt in *Public School Organization and Administration*, p. 366.

CHART II  
 MEDIAN MODIFICATION OF THE ORGANIZATION OF A COMPLETE ADMINISTRATIVE AND SUPERVISORY STAFF OF SEVENTEEN PERSONS FOR A LOCAL ADMINISTRATIVE SCHOOL UNIT

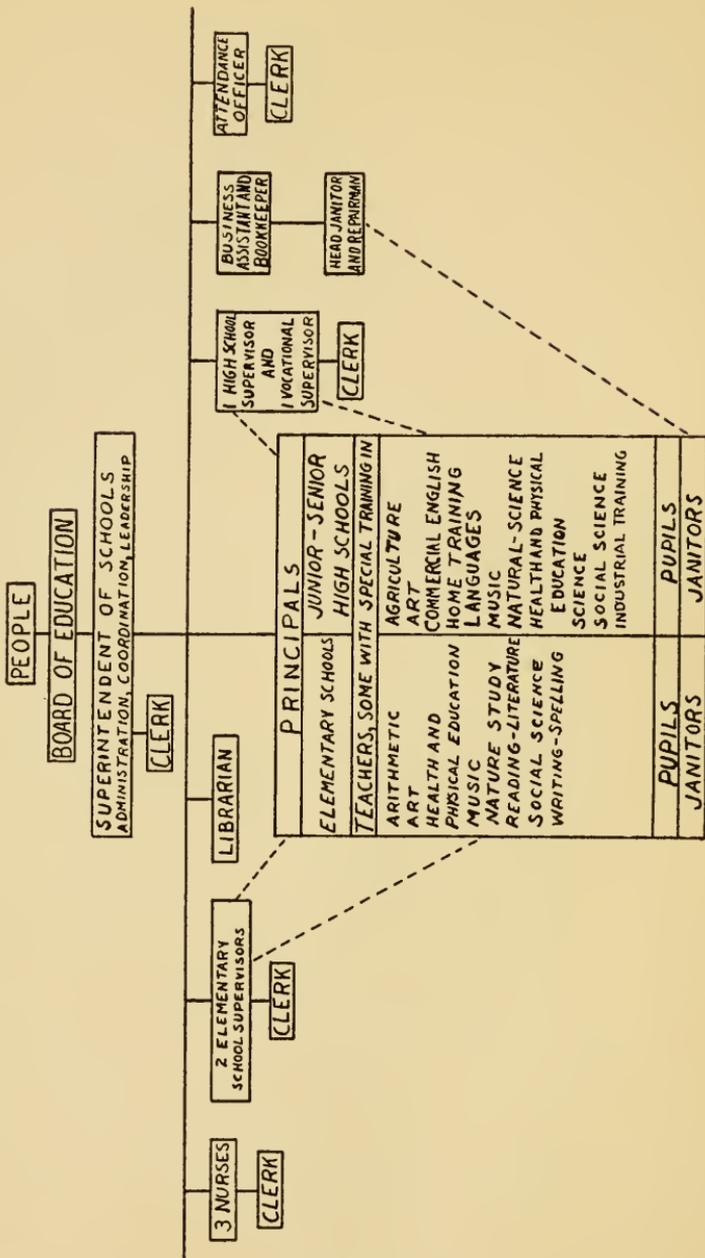


CHART III

MAXIMUM MODIFICATION OF THE ORGANIZATION OF A COMPLETE ADMINISTRATIVE AND SUPERVISORY STAFF OF FOUR PERSONS FOR A LOCAL ADMINISTRATIVE SCHOOL UNIT

PLAN 1

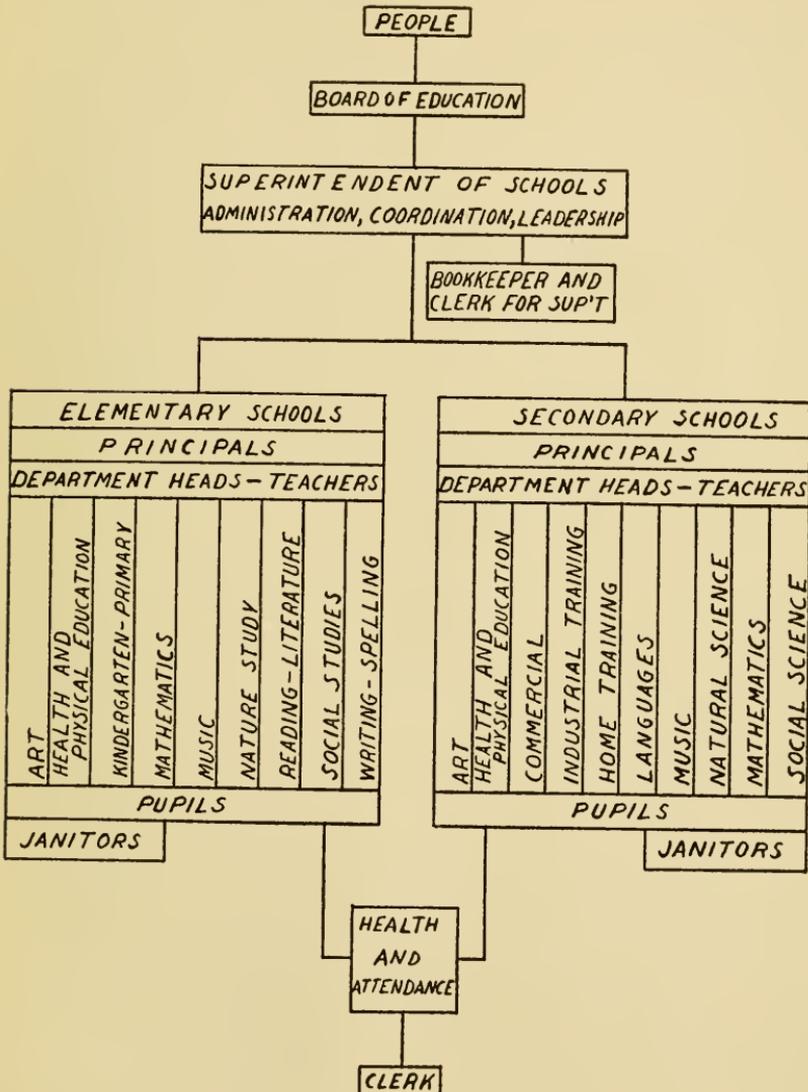
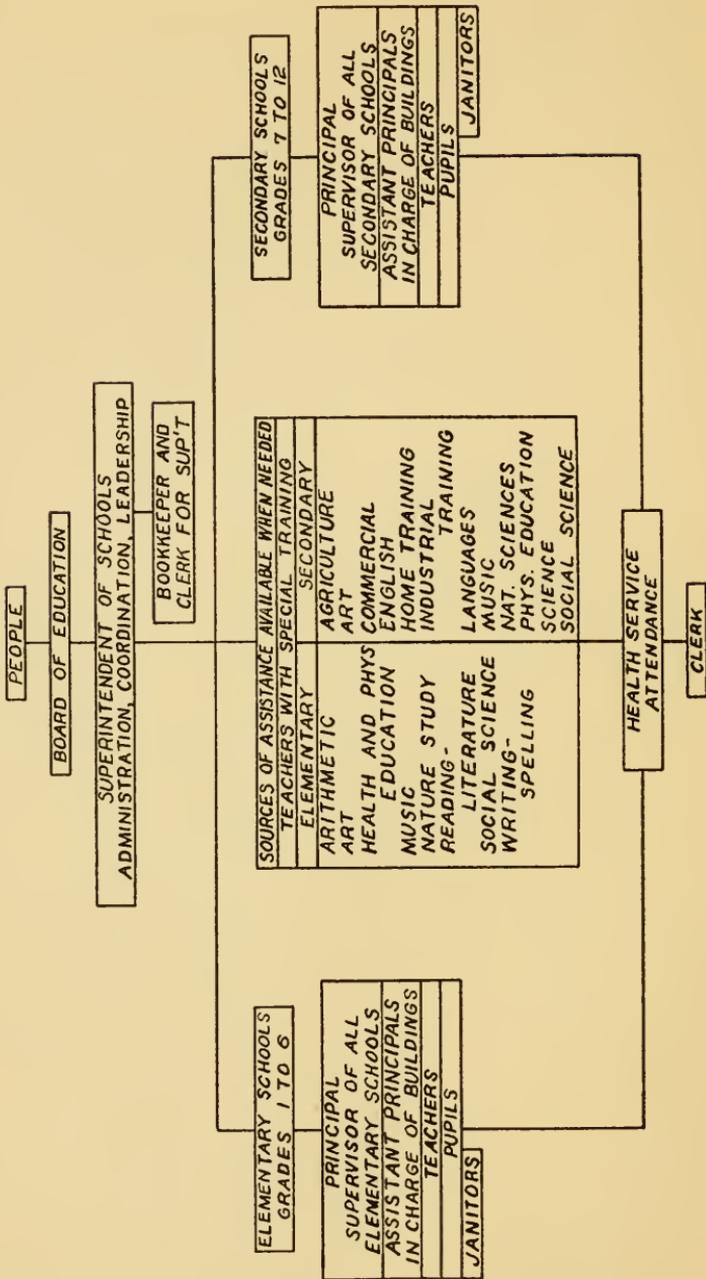


CHART IV  
 MAXIMUM MODIFICATION OF THE ORGANIZATION OF A COMPLETE ADMINISTRATIVE STAFF OF FOUR PERSONS FOR A LOCAL ADMINISTRATIVE SCHOOL UNIT  
 PLAN 2



### SUMMARY

In addition to providing adequate school and attendance units, the local unit of school administration has the function of providing (1) educational and business administration, (2) supervision of instruction, (3) health supervision, and (4) census and attendance supervision.

Educational and business administration is provided through a school board of five to nine members elected by the people for overlapping terms of five to nine years and by a superintendent of schools who is elected by the school board and who acts as the executive officer of the board. The school board should be fiscally independent and organized according to the requirements of the Unit type. The board should formulate and enact policies and the superintendent should execute them. The superintendent should have power to initiate and execute the appointment of all necessary assistants and teachers and should act as the coordinating agency of all the educational and business work of the school system.

In order to provide supervision of instruction in an adequate school program there should be at least ten supervisors and one trained librarian. A more limited supervising organization will require that an individual supervisor render two or more specialized types of services. If the supervisory services are to be provided in a financially economical manner the number of supervisors must bear a reasonable relationship to the number of teachers. Available data indicate that there should be at least one supervisor to each forty or fifty teaching positions.

The health service of the school system should consist of adequate provision for administration of the educational health department, pupil health examinations, health instruction, supervision of health instruction, and follow-up health work. Accepted standards of health work require at least one health nurse to each 2,000 school children and at least one supervisor of health education for the school system.

Adequate provision should be made to enforce the provisions of compulsory attendance laws, to keep permanent and continuous census records, to investigate non-attendance, to issue permits for the employment of minors, and to inspect work-

ing conditions of employed minors. Accepted standards as to the number of persons required to do such work require at least one attendance supervisor or officer for not more than 6,000 census children.

The number of employees necessary for a standard administrative and supervisory organization without requiring one person to perform two or more specialized services is thirty-one persons. Such an organization would accommodate approximately 12,000 pupils. Since it seldom is possible to organize local administrative units of 12,000 or more pupils, it becomes necessary to modify the central administrative and supervisory staff. Two possible modifications have been presented, the median modification calling for a staff of seventeen persons, an organization that can accommodate approximately 6,000 pupils; and the maximum modification calling for four persons, an organization that can accommodate 1,750 pupils.

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## CHAPTER IV

### THE SIZE OF A SATISFACTORY LOCAL UNIT OF SCHOOL ADMINISTRATION

It is the purpose of this chapter to define the size of a satisfactory local unit of school administration. It can be safely assumed that the size of the local unit should be such that the necessary administrative and supervisory services can be offered at a cost that bears a reasonable relationship to the total current cost of the educational program. It is necessary, therefore, to determine (1) the probable cost of satisfactory administrative and supervisory organizations, (2) the probable total current cost of a satisfactory educational program, and (3) a reasonable relationship between these two costs.

#### COST OF ADMINISTRATIVE AND SUPERVISORY ORGANIZATIONS

The amount which will be expended for salaries by the central organization can be estimated on the basis of the statistics of salaries paid in city school systems. (See Table X.) Data on salaries in county school systems are also useful. The median salary of county superintendents of schools in Maryland and Louisiana<sup>1</sup> in 1930-31 was \$3,600. (16: 38-39 and 18: 269.) These two states are selected because their schools are organized with the county as the local unit of administration and the superintendents are selected by boards of education rather than by popular vote. Therefore, the salaries paid to these superintendents may be considered indicative of the minimum salaries necessary to obtain the services of trained persons. The median annual salary of county elementary school supervisors in the United States in 1930 was \$2,412. (4: 298.)

<sup>1</sup>Parish superintendent in Louisiana.

TABLE X  
 MEDIAN SALARIES PAID TO ADMINISTRATIVE AND SUPERVISORY EMPLOYEES  
 IN CITY SCHOOL SYSTEMS<sup>1</sup>

EMPLOYEES	CITIES 10,000 TO 30,000 POPU- LATION		CITIES 5,000 TO 10,000 POPU- LATION	
	1930-31	1932-33	1930-31	1932-33
Superintendent	\$5149	\$4600	\$4188	\$3818
Business Manager	3200	2788	2500	—
Attendance Officer	1215	1273	—	—
Nurses	1716	1632	1639	1562
Superintendent of Bldgs. and Grounds	2175	2007	1900	1860
Supervisors of Intermediate and Gram- mar Grades	2259	2450	2150	—
Supervisor of Primary Grades	2217	2213	1950	2033
Director of Research	2150	2075	2425	—
Supervisor of Art	1875	1797	1696	1562
Supervisor of Music	2043	1913	1772	1608
Supervisor of Writing	1888	1838	1586	1325
Supervisor of Health	1875	1650	1700	1075
Supervisor of Vocational Education	3025	2700	2600	2200
Supervisor of Manual Arts	2365	2246	2103	1881
Supervisor of Home Economics	1832	1750	1650	1494
Supervisor of Physical Education	2344	2234	2172	1905
Supervisor of Junior High School	—	3100*	—	—
Secretary to Superintendent	1250	1297	—	1079
Clerks in Other Administrative and Su- pervisory Offices	1113	1074	1057	953

<sup>1</sup>Derived from references 19 and 20.

\*Cities 30,000 to 100,000, other data not available.

In Maryland the minimum annual salary as defined by state law is \$2,400. (18: 269.) In Louisiana the average annual salary is approximately \$2,000. (16: 40-1.)

In addition to the cost of salaries, the central administrative and supervisory organization has certain other expenses, such

as, travel, office operation, printing, legal service, and the expense of the board of education. Detailed data on these items are not available. The financial reports of Maryland county school systems are sufficiently detailed, however, to provide some information as to reasonable amounts for these purposes. (18: 318.) Analysis of the data in these reports shows that the cost of travel for superintendents is 10 per cent of the amount of superintendents' salaries; expense of board members is 10.1 per cent; office expense and printing is 44.1 per cent; legal service is 7.5 per cent; and all other expense connected with the administrative division is 19.2 per cent. The necessary expenditures for traveling in connection with supervision amount to about 15 per cent of the salaries of the supervisors.

**THE COST OF A STANDARD CENTRAL ORGANIZATION:** In the previous chapter the number of persons and the positions they are to occupy in a standard central organization for administration and supervision of a school system have been indicated. The work of these thirty-one persons falls into four general classifications: (1) administration or general control, (2) supervision of instruction, (3) operation of the school plant, and (4) auxiliary agencies (health service and libraries). For convenience in further discussions the estimated costs will be presented according to these classifications. The estimated minimum cost of a standard central organization of thirty-one persons is shown in Table XI.

**THE COST OF MEDIAN MODIFICATION OF A STANDARD CENTRAL ORGANIZATION:** It has been shown that an organization of seventeen persons would constitute a median modification of a complete standard central organization. The minimum cost of such an organization is shown in Table XII.

**THE COST OF MAXIMUM MODIFICATION OF A STANDARD CENTRAL ORGANIZATION:** The maximum modification of the standard central organization has been shown to require four persons. The estimated cost of such an organization is shown in Table XIII.

In making a distribution of the expense or cost as shown in Table XIII among administration, supervision, and auxiliary agencies, it is reasonable to assume that half the time of the superintendent under this arrangement will be spent in super-

vision of instruction, that three-fourths of the time of the bookkeeper-clerk will be devoted to administration and one-fourth of his time to the superintendent's supervisory activities, and that two-thirds of the time of the nurse-attendance officer and the clerk will be devoted to health work and one-third to attendance work. This division of time gives a basis for distributing the expense of this plan as follows:

Administration .....	\$4,833	
Instruction (Supervision).....	2,700	
Auxiliary Agencies .....	1,867	\$9,400

TABLE XI

ACCEPTABLE MINIMUM COST OF A STANDARD CENTRAL ORGANIZATION FOR ADMINISTRATION AND SUPERVISION OF A LOCAL SCHOOL DISTRICT

I. Administration .....		\$20,745
1. Salary of superintendent .....	\$5,000	
2. Travel of superintendent .....	500	
3. Office expense and printing .....	2,220	
4. Legal services .....	375	
5. Expense of board .....	550	
6. Other expense of administration .....	950	
7. Clerk for superintendent .....	1,200	
8. Two attendance officers .....	3,000	
9. Two clerks for attendance officers .....	2,000	
10. Travel for attendance officers .....	700	
11. Business manager .....	2,700	
12. Bookkeeper-clerk .....	1,200	
13. Travel for business manager .....	350	
II. Instruction (Supervision) .....		\$24,800
14. General Supervisor .....	\$2,400	
15. Director of Research .....	2,400	
16. Supervisor of Atypical Classes .....	1,600	
17. Supervisor of Music .....	1,600	
18. Supervisor of Art and Writing .....	1,600	
19. Supervisor of Health .....	1,600	
20. Supervisor of Manual Arts .....	1,800	
21. Supervisor of Household Arts .....	1,600	
22. Two supervisors of Physical Education .....	3,600	
23. Three clerks for supervisors .....	3,600	
24. Travel for supervisors .....	3,000	
III. Operation .....		\$ 2,350
25. Supervisor of Buildings and Grounds .....	\$2,000	
26. Expenses of Supervisor of Buildings and Grounds .....	350	
IV. Auxiliary Agencies .....		\$14,400
27. Six nurses' salaries .....	\$9,100	
28. Expenses of nurses .....	1,350	
29. Two clerks for nurses .....	2,000	
30. Library supervisor .....	1,600	
31. Expense of library supervisor .....	350	
Grand Total .....		\$62,295

TABLE XII

## ACCEPTABLE MINIMUM COST OF THE MEDIAN MODIFICATION OF A CENTRAL ORGANIZATION FOR ADMINISTRATION AND SUPERVISION OF A LOCAL SCHOOL DISTRICT

I. Administration .....	\$12,530
1. Salary of superintendent .....	\$4,000
2. Travel of superintendent .....	400
3. Office expense and printing .....	1,600
4. Legal services .....	280
5. Expense of board .....	400
6. Other expense of administration .....	600
7. Clerks for superintendent .....	1,200
8. Salary of attendance officer .....	1,500
9. Clerk for attendance officer .....	1,000
10. Travel for attendance officer .....	350
11. Bookkeeper .....	1,200
II. Instruction (Supervision) .....	\$13,700
12. Salaries for two elementary supervisors .....	\$4,800
13. One secondary school supervisor .....	2,750
14. One vocational education supervisor .....	2,750
15. Two clerks for supervisors .....	2,000
16. Travel and expense of supervisors .....	1,400
III. Operation .....	\$ 1,850
17. Head janitor and repairman .....	\$1,500
18. Travel and expense of head janitor .....	350
IV. Auxiliary Agencies .....	\$ 8,000
19. Salaries for three nurses .....	\$4,500
20. One clerk for nurses .....	1,000
21. Travel and expense of nurses .....	600
22. Salary of library supervisors .....	1,600
23. Expenses of library supervisors .....	300
Grand Total .....	<u>\$36,080</u>

TABLE XIII

## ACCEPTABLE MINIMUM COST OF THE MAXIMUM MODIFICATION OF A CENTRAL ORGANIZATION FOR ADMINISTRATION OF A LOCAL SCHOOL DISTRICT

1. Salary of superintendent .....	\$3,600
2. Expenses of superintendent, his office and the board .....	1,800
Travel of superintendent .....	\$300
Office expense and printing .....	900
Legal services .....	175
Expenses of board .....	200
Other expense .....	225
3. Salary of bookkeeper-clerk .....	1,200
4. Salary of nurse-attendance officer .....	1,800
5. Salary of clerk for nurse-attendance officer .....	1,000
Total Expense .....	<u>\$9,400</u>

THE PROBABLE TOTAL CURRENT COST OF A SATISFACTORY  
EDUCATIONAL PROGRAM

For our immediate purpose, the cost of a school program may be expressed in terms of expenditures. Data on current expenditures which may be used in estimating the current expenditures required for a satisfactory school program are reported according to six general divisions as follows: (11: 472-3.)

1. GENERAL CONTROL which includes expenditures for salaries and expenses of the superintendent, attendance officers, business manager and their clerks and assistants, and for expenses of the school board, school census, school elections, and legal services, and for records, printing, telephone toll charges, telegrams, and supplies used by the superintendent.

2. INSTRUCTION which includes salaries of teachers, principals, supervisors and school clerks, the expense of supervisors, the cost of all textbooks supplied free to children and all instructional materials and supplies, and a charge for that part of the superintendent's time which is devoted to the supervision of instruction.

3. OPERATION which includes the expenditures for janitors' salaries for keeping buildings and grounds in fit condition; for services, salaries and wages of repairmen, and expenditures for janitors' supplies, cleaning and sanitary materials, water, light, fuel, power, and telephone.

4. MAINTENANCE which includes all expenditures for labor and materials used for maintaining the plant, equipment and grounds in good condition. Any expenditures which are necessary to maintenance of the value of the capital investment are usually classified as maintenance.

5. AUXILIARY AGENCIES which include expenditures for transportation of pupils, medical examinations, nurses' salaries and expenses, school library, general community welfare, school entertainments, and conventions.

6. FIXED CHARGES which include expenditures for insurance, improvement taxes, pensions, rents, and refunds.

In order to determine the percentage of the total current cost of schools each of the above classifications constitutes, data

on the distribution of expenditures in city and county school systems will be analyzed. The United States Office of Education has published these data for city school systems. Data for county school systems can be obtained from a study by Turner and from published reports by the state departments of education of Louisiana and Maryland. These data are shown in Table XIV, in which only columns 4 and 7 require explanation. Turner, in developing standard distributions of school expenditures, used the data for selected county school systems in Maryland, Tennessee, Louisiana, and North Carolina. (25.) The percentages in column 4 show the limits above which 25 per cent of the schools went and below which 25 per cent fell. For example, 25 per cent of the school systems allotted less than 4.1 per cent of total current expenditures to general control and 25 per cent allotted more than 6.2 per cent to that purpose. Thus, the percentages shown in column 4 give reasonable limits within which the percentage distributions should fall in county school systems. The percentages shown in column 7 are based on an empirical inspection of the preceding columns and give a working standard for judging given distributions.

The total current expense of the school program can be estimated for each of the six divisions. Since the most reliable basis for estimating total current expense, or any major item of expense, is the amount of teachers' salaries (9: 88 and 24: 43), data concerning the salaries of teachers will be presented first.

**INSTRUCTION:** This item includes teachers' salaries, principals' salaries, supervisors' salaries and expenses, textbooks, and instructional supplies.

*Teachers' salaries:* A consideration of salaries actually paid to teachers is suggestive in determining the necessary salaries for teachers having the minimum qualifications of two years of college or normal training for elementary teaching and four years of college training for high school teaching. The average salary of teachers in consolidated schools in 1928 was \$1,000. (4: 275.) In 1930 the median salary paid to teachers in three-or-more-teacher schools in villages and towns was \$1,157. (13: 54.) In Maryland and Louisiana, states which represent effective types of rural school organization, the aver-

TABLE XIV  
PERCENTAGE DISTRIBUTION OF CURRENT EXPENDITURES\*

ITEM	1	2	3	4	5	6	7
	CITIES 10,000 TO 30,000 1927-28	CITIES 10,000 TO 30,000 1929-30	TURNER'S STANDARD	MIDDLE 50 PER CENT TURNER'S SAMPLE	MARYLAND COUNTIES	LOUISIANA PARISHES	SUGGESTED STANDARDS
General Control	5.5	4.0	4.85	4.1-6.2	3.3	4.0	6.75
Instruction	73.1	75.1	79.0	71.8-82.6	75.4	71.0	74.4
Operation	12.2	11.3	6.65	3.8-8.1	7.0	6.0	11.75
Maintenance	3.5	3.9	3.15	2.1-4.0	3.4	4.5	3.7
Auxiliary Agencies	3.5	3.2	4.85	2.2-9.6	9.4	13.0	3.35
Fixed Charges	2.2	1.9	1.1	0.65-2.3	1.5	1.5	2.05

\*Column 1 from 10 (a);9; column 2 from 10 (b);504; column 3 from 25; 34; column 4 from 25; 35; column 5 from 18; 232; column 6 from 10; 62-3.

age salaries of white elementary teachers in 1930 were \$1,150 and \$983 respectively, and for white high school teachers \$1,559 and \$1,451 respectively. (17:75 and 16:99.) In 1933 the average salaries paid to teachers in 508 cities of 5,000 to 10,000 population were: elementary school, \$1,217, junior high school, \$1,375, and senior and regular high school, \$1,575. (20: 46.) Irby has shown that in Arkansas the minimum amount of money on which teachers can maintain acceptable standards of living and make a reasonable amount of professional progress is \$1,200 annually. (14: 131-4.)

These data indicate that minimum annual salaries should be approximately \$1,200 for elementary teachers and \$1,600 for high school teachers. Practice appears to justify a differential between the salaries of junior and senior high school teachers, the statistics indicating approximately \$1,400 and \$1,600 respectively. Since it appears likely that the minimum acceptable size of school or attendance unit will best function with a six-year junior-senior high school with teachers working in teaching fields throughout the six-year level rather than strictly on the junior or senior levels, it is doubtless more practicable to consider \$1,600 the minimum salary. Another reason for this standard is that neither practice nor expert opinion would justify the setting up of differentials in the amounts of training required of teachers on these two levels.

*Principals' salaries:* The data from which principals' salaries can be estimated are: The average salary of rural school principals in the United States in 1925 was for elementary schools \$1,965, and in 1930, \$1,550; and for high schools in 1925, \$2,438, and in 1930, \$2,181. (13: 54.) In Maryland the average salary of an elementary principal in 1929-30 was \$1,650 and of a high school principal \$2,300. (18: 69, 143.) In 508 cities of 5,000 to 10,000 population the average annual salaries were: supervising principal of elementary school, \$2,314; teaching principal of elementary school, \$1,465; junior high school principal, \$1,956; senior and regular high school principal, \$2,603. (20: 48.)

From the above data it can be concluded that the minimum salary of an elementary school principal should be about \$1,600 and of a high school principal about \$2,000. These salaries are

approximately in keeping with the statistics quoted, except that the salary of the high school principal is somewhat lower. That salary, however, is approximately in keeping with the average salary of rural high school principals and the average salary of junior high school principals in cities of the population group 5,000 to 10,000.

To arrive at the salary per teaching unit it is assumed that under minimum standard conditions the principal will be a teaching principal and the difference of \$400 between the salary of the principal and the salary of a teacher will be distributed equally among the teaching units of a minimum standard school. In the elementary school the \$400 will be divided among seven units and in the high school among ten units, giving \$57 and \$40 respectively.

*Textbooks and supplies:* Since the average salaries paid to teachers in the State of Maryland are approximately the same as the minimum salaries set up above and since free textbooks are provided, the data for Maryland are useful in estimating the probable expense of textbooks and supplies. For the same reasons the data for school systems in cities of 10,000 to 30,000 population are useful. In Maryland counties the expenditures for textbooks and supplies are approximately 7 per cent of teachers' salaries. (18: 319.) In city school systems the expenditures for textbooks and supplies are 6.45 per cent of teachers' salaries in the elementary schools and 7.88 per cent of teachers' salaries in the high schools, or an average of 7.07 per cent for elementary and high schools considered together. If, therefore, 7 per cent of the amount of teachers' salaries is accepted as a standard cost for textbooks and instructional supplies, the amount will be approximately \$85 per teacher (teaching unit) in the elementary school, and \$115 per teacher (or teaching unit) in the high school.

*Supervisors' salaries and expenses:* The estimated cost of the salaries and expenses of supervisors per teaching unit may be based on the cost of supervision as already shown under the estimated cost of the central organization for administration and supervision. Using the the median modification of a standard organization as the basis of estimation, the cost of a supervisory unit in the elementary school will be about \$3,000 and

in the high school about \$3,350. With an elementary supervisor for each forty-five to fifty elementary teachers and a high school supervisor for each forty to forty-five high school teachers, the cost of supervision per teaching unit will be about \$65 in the elementary school and \$85 in the high school (6-6 organization).

On the basis of the amounts set up in the foregoing paragraphs, the expected total current cost of instruction will be \$1,407 per teaching unit in the elementary school and \$1,840 in the high school.

**GENERAL CONTROL:** An examination of Table XIV shows that expenditures for general control comprise about 4.75 per cent of the current expenditures for schools. Analysis of the data of this table indicates that on the basis of averages for the years 1928-29 and 1930-31 for cities 10,000 to 30,000 population, general control comprises about 5.47 per cent of the expenditures for instruction. If this percentage is used as a basis for estimating the expense of general control, it is found that the expense will be about \$75 per elementary teaching unit and \$100 per high school teaching unit.

**OPERATION:** From Table XIV it will be seen also that the expense of operation of the school plant can be expected to be about 11.75 per cent of the total current cost. In city systems the cost of operation is about 15.03 per cent of the cost of instruction. Another check on the cost of operation is as follows: In an elementary school with seven teaching units housed in a standard school plant there will be about 10,000 square feet of floor space, and about five acres of grounds. A school plant of this size is about a normal work-load for one janitor. (22: 27-31.) The data from Maryland financial reports (City of Baltimore in particular) indicate the janitors' supplies cost about 8 per cent of the janitors' salaries; fuel, about 40 per cent; and other expenses of operation, about 20 per cent. (18: 319.) On the basis of \$900 annual salary for the janitor (22: 22 and 20: 50), the total cost of operation would be \$1,512 and for a seven-teacher school the cost would be \$216 per teaching unit. This amount for the elementary school is a little more than 15 per cent of the instruction cost. For the high school the cost for ten teaching units would still involve the salary of

one janitor with possibly some extra help. At \$1,200 for a janitor's salary the total cost would be about \$200 per teaching unit. This amount is less than 15 per cent of instructional cost, but it appears to be a reasonable minimum cost and therefore will be used.

**MAINTENANCE:** In city school systems the expense of maintenance of the school plant is about 5 per cent of the expense of instruction and about 3.5 per cent of the total current expense. (Table XIV.)<sup>1</sup> On the basis of 5 per cent of the expense of instruction, maintenance will cost about \$70 per teaching unit in the elementary school and \$90 per teaching unit in the high school.

A check on these amounts can be made as follows: The purpose of expenditures for maintenance is to keep the capital investment up to par. If depreciation is estimated at an average annual amount of about 2.5 to 3 per cent of the original investment, the annual amount necessary for maintenance can be determined, provided, of course, the probable original investment in the school plant is known. The probable minimum cost of a building and its equipment for a school of six or seven teaching units is \$2,250 per room, and of a building and equipment for a school of eight to twelve teaching units, \$3,500 per room. (6: 327; 7: Chapter IV.) Two and a half to 3 per cent of these amounts is approximately \$70 per elementary teaching unit and \$90 per high school teaching unit.

**AUXILIARY AGENCIES:** The principal expense under this item of cost is for health service and libraries. For schools in rural areas the expense of transportation is of great importance. The estimated expense will be presented here under two divisions: transportation, and other auxiliary agencies.

*Transportation:* The cost of transportation varies greatly in different situations. Therefore, the best estimate of the probable expense of transportation can be obtained from a consideration of the costs in various states.

Among the states the annual expense per pupil transported ranges from \$10.85 in North Carolina to \$96.92 in the District of Columbia, with a national average of \$24.96. North Carolina transports daily 200,416 children,

a larger number than any other state. Indiana and Ohio rank next in order with 155,203 children and 150,600 children, respectively. The annual expense per child in these states is \$29.59 and \$27.89, respectively. Arkansas ranks ninth among the states in the number of children transported and second in low cost per pupil, transporting 50,332 children daily at an annual cost of \$11.78 per pupil. In Maryland and Louisiana, two states that operate schools through the county as the local unit of administration and have many consolidated rural schools, the annual expense per pupil for transportation is \$24.33 and \$25.09, respectively. (21: Vol. VIII, No. 9.)

The average expense per pupil annually for school transportation in the United States is \$24.96. Among the thirteen states that transport the largest number of pupils, the cost in the median state is \$25.00. (21: Vol. VIII, No. 9.) In the light, however, of the low costs in such states as North Carolina, Mississippi, and Arkansas, it seems very likely that \$25.00 per pupil is unnecessarily high. The average annual cost per pupil in the five states transporting the largest number of children is about \$20.00. Since it is the average between these two figures, \$22.50 per pupil will be used in estimating the cost of transportation in projecting a consolidated program in typical rural areas of the nation.

Before the total expense of transportation can be estimated it is necessary to know the expected percentage of children to be transported. As is shown in Chapter II, the best estimate is that the consolidation of schools in typical rural areas will require transportation for about 50 per cent of the pupils. In states where separate statistics of the cost of transportation of elementary school pupils and of high school pupils have been published, it has been found that a higher percentage of high school pupils are transported than of elementary school pupils. This is true because elementary schools are usually located nearer the homes of the pupils than high schools. The available data seem to indicate that the normal expectation is that about 40 per cent of the elementary school pupils and

about 60 per cent of the high school pupils will be transported.<sup>2</sup> (8 and 18: 245.)

The average expense of transportation of a high school pupil is usually greater than that of an elementary pupil. The distance and the number of pupils per bus are the factors that largely account for the difference. In California, the expense of transporting an elementary school pupil is about 75 per cent of the average expense of transporting all pupils, and the average expense for a high school pupil is about 116 per cent of the average for all pupils. (12: 11.) In Maryland, the corresponding percentages are 97 per cent and 108 per cent respectively. (18: 75 and 149.)

On the basis of the foregoing conditions it appears that a fair basis of estimating the cost of transportation in a typical rural area of consolidated schools is to assume that 40 per cent of all elementary school pupils will be transported at an average annual cost of \$20 per pupil, and that 60 per cent of all high school pupils will be transported at an average annual cost of \$25 per pupil. Therefore, in a school of the minimum acceptable size, the cost can be estimated at \$320 per teaching unit for the elementary school and \$450 per teaching unit for the high school.

*Other auxiliary agencies:* In city school systems where there is no cost of transportation, the cost of auxiliary agencies is an average of about 4.5 per cent of the cost of instruction. On this basis the amount per teaching unit for auxiliary agencies will be approximately \$63 for the elementary school and \$83 for the high school.

**FIXED CHARGES:** This item in the median city school system is about 2.75 per cent of the cost of instruction. However, the range is great. (10 (a).) Insurance and improvement taxes constitute the bulk of such costs. Improvement taxes are usually not so heavy on schools in rural areas as in the cities, but insurance rates are frequently higher. Insurance charges, however, will be greatly reduced if the state will follow some such plan as that used by South Carolina in the state insurance of public property. (23: 102-6.) Accordingly, the estimated

<sup>2</sup>Unpublished data in State Department of Education, Arkansas.

Unpublished

cost of fixed charges here presented is 2 per cent of instruction costs, or \$30 per elementary school unit and \$37 per high school unit.

The data presented above are summarized in Table XV. The percentage distribution of the items of estimated cost are also shown in the table and as a check on their reliability the standard percentage distribution is given.

Neither the absolute nor the relative amounts in Table XV have any degree of finality about them. They represent the probable unit cost and distribution among the items of cost of a satisfactory minimum standard school for a typical system of consolidated schools.

The estimated standard cost per teaching unit, using the ratio of forty pupils per teacher in elementary school and thirty in the high school, gives a cost of \$54.50 per pupil in elementary school and \$93.40 in high school. (6-6 organization.) A comparison with certain statistics of cost per pupil indicates that these amounts are not far from the minimum cost consistent with economic justice to the persons employed in the school system and with the type of service needed from the schools. In school systems in cities of 10,000, the average annual cost per pupil in average daily attendance in all schools is \$85.75. The cost of instruction per pupil in these systems is \$54.17 for elementary schools; \$75.66 for junior high schools; and \$96.77 for the senior and regular high schools. (10 (a): 6.) Thus the total cost per pupil under the proposed standard is approximately equal to the cost per pupil for instruction alone in the city systems. The statistics for fourteen states as to the cost per pupil attending are: elementary school, \$55.02; junior high school, \$95.63; separately organized senior high schools, \$137.09; and regular and vocational high schools, \$135.99. (3: 68.)

The data in Table XV indicate that the cost of general control and supervision of instruction constitutes approximately 7.7 per cent of the total current cost, excluding the cost of transportation. The cost of transportation is excluded because it represents an addition to the necessary cost of maintaining satisfactory schools in places where transportation is necessary, and because the standards developed in this study are

TABLE XV  
ESTIMATED STANDARD COST PER TEACHING UNIT OF A MINIMUM STANDARD SCHOOL SYSTEM

STANDARD CLASSIFICATION	ELEMENTARY SCHOOL	HIGH SCHOOL	PERCENTAGE DISTRIBUTION					
			Elementary		High School		Standard	
			With Trans- porta- tion	Without Trans- porta- tion	With Trans- porta- tion	Without Trans- porta- tion		
General Control	\$ 75	\$ 100	3.44	4.03	3.57	4.25	4.75	
Instruction	1407	1840	64.54	75.65	65.67	78.23	74.40	
(a) Teachers' Salaries	\$1200	\$1600	{ 55.05	{ 64.52	{ 57.10	{ 68.03		
(b) Principal's Salary	57	40	{ 2.61	{ 3.06	{ 1.43	{ 1.73		
(c) Textbooks and Supplies	85	115	{ 3.90	{ 4.57	{ 4.10	{ 4.89		
(d) Supervision	65	85	{ 2.98	{ 3.49	{ 3.03	{ 3.61		
Operation	215	200	9.86	11.56	7.14	8.51	11.75	
Maintenance	70	92	3.21	3.76	3.28	3.91	3.70	
Auxiliary Agencies	383	533	17.57	3.39	19.02	3.53	3.35	
(a) Transportation	320	450	{ 14.68		{ 16.06			
(b) Other	63	83	{ 2.89		{ 2.96			
Fixed Charges	30	37	1.38	1.61	1.32	1.57	2.05	
Total Current Cost	\$2180	\$2802	100.	100.	100.	100.	100.	
Average Cost per Pupil with Transportation	\$54.50	\$93.40						
Average Cost per Pupil without Transportation	\$46.50	\$78.40						

based largely on the statistics of school systems that do not need transportation or where the cost of transportation has been excluded from consideration.

#### THE SIZE OF SATISFACTORY LOCAL UNITS OF SCHOOL ADMINISTRATION

If the cost of administration and supervision constitutes 7.7 per cent of the total current cost of the school program, if the cost of the necessary administrative and supervisory services and the cost of a teaching unit in a satisfactory school are known, it follows that the number of teaching units (or the size of a satisfactory unit for administration and supervision) necessary to keep the proper relationship (7.7 per cent) between the cost of administration and supervision and the total current cost of the school program can be determined. The determination of the size of the local unit of school administration on the basis of the data stated above can be shown by formula:

A = the cost of administration and supervision

T = the total current cost of the school program

U = the cost of a standard teaching unit

S = the total number of teaching units, or the size of the local unit of school administration

Given the condition that A is a known amount and must be 7.7 per cent of T, and U is a known amount.

Required from the data given to find the value of T and of S.

Therefore,

$$T = \frac{A}{.077}$$

$$S = \frac{T}{U}$$

Since the data as to the expected cost per teaching unit are separated for elementary schools and high schools, before applying the above formula it will be necessary to find out the relative proportion of elementary school teaching units and high school teaching units to be expected in a local unit of school administration. Such information will be necessary in order

to weight the cost per elementary teaching unit and the cost per high school teaching unit in assigning a value to U.

It has been shown that the high school should have a minimum of ten teaching units, or approximately 300 pupils. The question arises as to how many elementary pupils will be needed to expect an enrollment of 300 high school pupils. This question can be answered for a consolidated school system where high school advantages are made available to all pupils by an examination of the statistics of certain areas. Data for five states and for eighteen cities presented in Table XVI show that for the school systems included, the enrollment in the upper six grades runs as high as 72.5 per cent in the State of Washington and for eighteen city systems is almost 74 per cent.

TABLE XVI

COMPARISON OF ENROLLMENT IN GRADES ONE TO SIX WITH ENROLLMENT IN GRADES SEVEN TO TWELVE, 1929-30\*

SCHOOL SYSTEMS	ENROLLMENT		PERCENTAGE GRADES 7 TO 12 IS OF GRADES 1 TO 6
	<i>Grades 1 to 6</i>	<i>Grades 7 to 12</i>	
Washington	197,658	143,653	72.5
Utah	80,744	57,302	71.1
Oregon	119,248	83,347	70.0
Idaho	72,261	48,686	67.0
California	587,109	388,788	66.7
18 Cities 10,000 to 30,000 Popu- lation	46,186	34,077	73.8

\*Derived from 3:40, Table 10, for states; and for 18 cities from a random sample, excluding southern cities, from 10(a), Table 7, Group III cities.

On this basis, it seems reasonable to assume that the high school enrollment in the upper six grades or years should approximate 75 per cent of the elementary school enrollment. Thus, a minimum standard high school of 300 pupils and ten teachers will usually be connected with an elementary school of about 400 pupils and ten teachers. Equal weighting, therefore, should be given to the cost of elementary school units. It follows that since, exclusive of the cost of transportation, an

elementary teaching unit costs \$1,860 and a high school unit \$2,352, the cost of an average teaching unit will be \$2,106.

Therefore, in the formula  $S = \frac{T}{U}$ , U can be assigned the value of \$2,106.

From Tables XI, XII and XIII, it may be seen that the cost of administration and supervision for the three types of organization for administration are:

1. A standard organization which can be designated as  $A_1$  . . . . . \$45,545.

2. The median modification of a standard organization which can be designated as  $A_2$  . . . . . \$26,230.

3. The maximum modification of a standard organization which can be designated as  $A_3$  . . . . . \$7,533.

Using the sub-numerals 1, 2 and 3 to designate the three types of administrative organization, the data necessary for

using the formula  $T = \frac{A}{.077}$  and  $S = \frac{T}{U}$  are as follows:

$$A_1 = \$45,545$$

$$A_2 = 26,230$$

$$A_3 = 7,533$$

$$T_1 = \frac{\$45,545}{.077} = \$591,493$$

$$T_2 = \frac{26,230}{.077} = 340,650$$

$$T_3 = \frac{7,533}{.077} = 97,831$$

$$S_1 = \frac{T_1}{U} = \frac{591,493}{2106} = 280.9$$

$$S_2 = \frac{T_2}{U} = \frac{340,650}{2106} = 161.8$$

$$S_3 = \frac{T_3}{U} = \frac{97,831}{2106} = 45.9$$

We may conclude, therefore, that for a standard organization the local administrative unit should have 280 teaching units. Since the number of teaching units may be expected to be equally divided between the six-year elementary school and the six-year high school, there will be 140 elementary teaching units and 140 high school teaching units. In terms of the number of pupils, using the standards of forty pupils per elementary teaching unit and thirty pupils per high school teaching unit, there will be a total of 9,800 pupils.

For the median modification of a standard organization for administration and supervision there should be approximately 162 teaching units, of which eighty-one will be elementary school units and eighty-one high school units, to accommodate 5,670 pupils. For the maximum modification of a standard organization for administration and supervision there should be approximately forty-six teaching units, of which twenty-three will be elementary school units and twenty-three high school units, to accommodate 1,610 pupils. In terms of the number of pupils, these figures are in fair agreement with the sizes previously determined on the basis of the number of pupils each of the organizations for administration and supervision can serve effectively. In the preceding chapter it was shown that the number of pupils for each organization is approximately 12,000, 6,000 and 2,000 respectively.

The conclusion to be drawn is that the absolute minimum size of a local unit of school administration is a unit that has approximately 1,600 pupils and forty-six teaching units. However, if combination of functions and services in more than one major field by any individual in the personnel of the administrative and supervisory organization is to be avoided, a local unit of school administration must include at least 9,800 pupils and 280 teaching units.

#### SUMMARY

It is assumed that the size of a local unit of school administration should be such that necessary administrative and supervisory services can be provided at a cost that bears a reasonable relationship to the total current cost of the educational program.

It has been shown that:

1. The expected annual cost of necessary administrative and supervisory services for each of the three acceptable sizes of organization is:

- a. For a standard organization, \$45,545.
- b. For the median modification of a standard organization, \$26,230.
- c. For the maximum modification of a standard organization, \$7,533.

2. The expected annual total current cost, exclusive of the cost of transportation of a satisfactory educational program per teaching unit, is:

- a. For a six-year elementary school, \$1,860.
- b. For a six-year high school, \$2,353.

The expected number of teaching units in the six-year high school is the same as the expected number in the six-year elementary school, and, therefore, the average expected cost per teaching unit for all schools is \$2,106 annually.

3. The cost of administration and supervision is, as a rule, approximately 7.7 per cent of the total annual current cost of the school program.

On the basis of the assumption stated above and of the data presented, the minimum size of a satisfactory local unit of school administration has been found to be approximately 1,600 pupils and forty-six teaching units. It has also been found that in order to avoid the performance of two or more specialized services by one individual the size of the local unit of school administration should be approximately 9,800 pupils and 280 teaching units.

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## CHAPTER V

### STATUS OF LOCAL SCHOOL ATTENDANCE AND ADMINISTRATIVE UNITS

In the previous chapter standards for satisfactory attendance or school units and for satisfactory local units of administration have been developed. The purpose of this chapter is to show the extent to which these standards are observed throughout the country. The status of attendance units and administrative units, and the interrelationships between these two types of units are presented together with the status of units in general. Emphasis is placed on the implications of the facts presented as to equality of educational opportunity for the children affected.

#### ATTENDANCE OR SCHOOL UNITS

In determining standards for satisfactory schools, data pertaining to ten characteristics of satisfactory schools were presented. (However, the size of the school is by far the most important factor, since, as previously shown, the size of the school has direct bearing on offering satisfactory curricula at an economical cost per pupil, and on the organization of territory into satisfactory attendance units.

**ELEMENTARY SCHOOL OR ATTENDANCE UNITS:** It has been shown that a satisfactory attendance or school unit for an elementary school requires a minimum of 240 pupils and six teachers for six years of work. In cities of 2,500 or more, this standard has been largely attained. In 1930 the average school in cities of 2,500 to 10,000 population had 240 pupils, seven to eight teachers and thirty-two pupils per teacher. (3: Tables 4

and 5.) At the same time the average rural elementary school in the nation had forty-three pupils, one or two teachers and an average of twenty-eight pupils per teacher. Out of the 207,039 rural elementary schools in the United States in 1930 there were 148,712 one-teacher schools, largely of the eight-grade type. The data presented in Table XVII show that only three states, Massachusetts, New Jersey, and Utah, have rural elementary schools approaching adequate size. In fact, available data compel the conclusion that not more than 10 per cent of rural elementary schools have as many as six teachers or 240 pupils.

A significant observation drawn from the data presented in Table XVII is that the size of the school as measured by the enrollment per school increases as the size of the administrative unit increases. This indicates that there is some quality about larger administrative units that facilitates the enlargement of attendance or school units.

Practically every rural school survey made in recent years has pointed out that the prevalence of the small rural elementary school is not necessary or desirable. An example of reorganization that may be effected to overcome this condition is indicated in the state-wide plan for the consolidation of schools in Arkansas. In this state plans for the consolidation of schools were developed on the basis of a detailed study of each county. Special care was taken to make plans for consolidated schools that would be large enough to provide for the preservation of community interests and the convenience of the children affected. It was shown that the number of schools for white children could be reduced from 4,198 to 2,658, the number of one-teacher schools from 2,495 to 473, and the number of two-teacher schools from 920 to 478. It was further shown that approximately 75 per cent of all children could be placed in schools having four or more teachers. (9: 48.)

The inadequacy of the curriculum offering and of time allotment to various subjects and school activities, the age-grade status of pupils, and the achievement of pupils as compared with that of pupils in larger schools have been pointed out in Chapter II. The glaring deficiencies of the school buildings and equipment in the majority of small rural schools is too well-known to need any amplification here. In addition, the

TABLE XVII

THE SIZE OF RURAL ELEMENTARY SCHOOLS IN THE VARIOUS STATES, 1930\*

STATES WITH COMMON SCHOOL DISTRICT ORGANIZATION				STATES WITH TOWNSHIP ORGANIZATION										
STATES	No. of Teachers Per Sch.	Enrollment Per School	Enrollment Per Teacher	No. of One-room Schools	STATES	No. of Teachers Per Sch.	Enrollment Per School	Enrollment Per Teacher	No. of One-room Schools					
Arizona	4.13	136	32.9	172	Connecticut	2.33	115	49.2	463					
Arkansas	1.77	67	37.4	3,141	Indiana	2.94	98	33.3	2,054					
California	1.93	51	26.6	1,519	Maine	1.46	30	20.6	1,781					
Colorado	1.94	39	20.1	1,855	Massachusetts	4.80	80	16.6	498					
Idaho	1.95	49	25.0	865	New Hampshire	1.75	35	19.9	559					
Illinois <sup>1</sup>	1.73	38	21.7	10,072	New Jersey	7.41	226	30.5	407					
Iowa <sup>2</sup>	1.32	26	19.5	9,358	Pennsylvania	2.13	71	33.4	7,089					
Kansas	1.36	25	18.7	7,420	Rhode Island	---	---	---	84					
Michigan <sup>2</sup>	1.95	43	22.3	6,209	Vermont	1.22	25	20.1	1,075					
Minnesota	1.53	33	21.7	6,995	West Virginia <sup>3</sup>	1.85	43	23.2	4,289					
Mississippi	2.09	88	42.1	2,897	Median	2.13	71	23.2	1,170					
Missouri	1.47	34	23.5	7,352	STATES WITH COUNTY ORGANIZATION									
Montana	1.21	31	26.0	2,693	STATES	No. of Teachers Per Sch.	Enrollment Per School	Enrollment Per Teacher	No. of One-room Schools					
Nebraska	1.37	26	18.9	6,047	Alabama	2.13	84	39.2	2,896					
Nevada	1.95	40	20.3	185	Florida	2.88	105	36.3	946					
New York	2.79	45	16.3	7,796	Georgia	2.31	86	37.4	3,522					
North Dakota <sup>2</sup>	1.32	25	18.7	4,270	Kentucky	1.26	54	42.7	6,089					
Ohio	2.52	73	29.1	4,258	Louisiana	2.72	103	37.7	1,381					
Oklahoma	2.20	81	36.8	2,600	Maryland	2.39	74	30.8	1,024					
Oregon	1.05	36	34.3	1,302	New Mexico	2.64	77	29.2	618					
South Carolina	2.48	87	35.1	1,791	North Carolina	2.84	112	39.3	2,096					
South Dakota	1.31	22	16.9	4,744	Tennessee	2.32	83	36.0	3,091					
Texas	1.74	69	39.9	3,525	Utah	5.16	145	28.1	91					
Washington	2.23	66	29.6	960	Virginia	2.06	73	35.3	2,765					
Wisconsin	1.37	36	26.1	6,642	Median	2.39	84	36.0	2,096					
Wyoming	1.42	21	14.7	1,047	STATES WITH STATE ORGANIZATION									
Median	1.85	39	25.3	3,525	Delaware	2.06	57	28.0	178					

\*Data derived from references 3: 24 and 25.  
<sup>1</sup>Township system for high schools.  
<sup>2</sup>Magisterial district.  
<sup>3</sup>Partly township system.

majority of poorly trained and inexperienced teachers are found in the small rural schools. Furthermore, the small rural school can hardly hope to secure the services of qualified teachers because good teachers do not want to work under the undesirable conditions imposed upon them by the small school. The conditions are undesirable because of too many grades per teacher, poor living conditions, isolation, lack of professional prestige, complexity of the task, and few social contacts.

**HIGH SCHOOL ATTENDANCE UNITS:** It has been shown that a satisfactory attendance or school unit for high schools should have ten teachers with an enrollment of not less than 250 to 300 pupils depending on the type of organization, or seven teachers with not less than 175 to 210 pupils, depending on the type of organization. The schools should be organized on the basis of six years, grades seven to twelve, which may comprise either a six-year organization or a three-year junior high school and a three-year senior high school.

The extent to which high schools have attained at least these minimum standards may be determined from the data presented in Table XVIII. At least three-fourths of all high schools have fewer than 200 pupils and more than two-thirds

TABLE XVIII  
DISTRIBUTION BY SIZE OF ENROLLMENT OF HIGH SCHOOLS IN THE  
UNITED STATES, 1930\*

ENROLLMENT	ESTIMATED NUMBER OF TEACHERS PER SCHOOL	NUMBER OF SCHOOLS	PERCENTAGE OF ALL HIGH SCHOOLS
Under 50	3	5,943	26.7
51 to 100	4- 6	6,064	27.3
101 to 200	7- 9	4,603	20.7
201 to 500	10-20	3,111	14.0
501 to 1,000	21-40	1,421	6.4
Over 1,000	41 and over	1,095	4.9
Total		22,237	100.0
Median	4-61		

\*2:37 and 24.

have not reached the minimum of 175 pupils. More than half have 100 pupils or less, and nearly a third have fewer than fifty pupils.

Conditions are but little better in selected high schools as represented by membership in the North Central Association of Colleges and Secondary Schools, and the Association of Colleges and Secondary Schools of the Southern States. For example, in 1930 in the North Central Association, 12.1 per cent, and in the Southern Association 17.7 per cent of the high schools had fewer than 100 pupils, and 34.6 per cent and 29.6 per cent respectively had fewer than 200 pupils. (23: 307.)

The prevalence of the small high school is almost exclusively a rural problem as is shown in Table XIX. Nearly three-

TABLE XIX

PROPORTION OF HIGH SCHOOLS IN EACH SIZE GROUP LOCATED IN RURAL AND URBAN COMMUNITIES\*

TYPE OF SCHOOL	DISTRIBUTION OF HIGH SCHOOLS BY ENROLLMENT						
	<i>Fewer Than 50</i>	<i>51 to 100</i>	<i>101 to 150</i>	<i>151 to 200</i>	<i>201 to 250</i>	<i>251 to 300</i>	<i>More Than 300</i>
Rural High Schools	97.7	97.2	89.2	73.4	55.5	37.7	6.7
Urban High Schools	2.3	2.8	10.8	26.6	44.5	62.3	93.3

\*14:7.

fourths of the high schools having fewer than 200 pupils are in places of less than 2,500 population, and more than 97 per cent of all high schools having less than 100 pupils are in rural areas.

Not only are the high schools in rural areas below acceptable standards as to size, but even these schools are not widely available to the children living in rural areas. In 1928 the United States Office of Education (6: 2-5) reported that only 26 per cent of the children of high school age in rural areas were enrolled in high schools in the communities of those areas as compared with 71 per cent of urban children enrolled in high schools in the cities. This indicates the inadequate organization of rural territory into attendance units for high school purposes. The National Survey of Secondary Education reports that

the proportion of rural children of high school age attending high school in 1929-30 was about 39 per cent as compared with more than 58 per cent for urban children of the same age. This report is derived from data with corrections based on estimates of twenty-four states as to the number of rural children attending urban public high schools and eleven states as to the number of rural children attending urban private high schools. On this basis, the proportion of rural children attending any kind of high school is only about 80 per cent of the proportion of urban children attending high school. According to the National Survey of Secondary Education: "It is clear enough that this difference represents one of the major deficiencies in the aim in this country to offer equal opportunities to all and a major problem in achieving a parity in this respect of the two population groups concerned." (12: 17.)

The deficiencies of small high schools and the resultant inequalities of educational opportunities for the children affected are further exemplified by the limited curriculum offerings in small schools. These are characterized by the absence of vocational offerings except at prohibitive cost per pupil, by the excessive number of subject-matter fields teachers are required to teach, by restricted student activities, and by the relatively poor training and limited experience of teachers. There is ample evidence that the size of the school is the most important factor in limiting the opportunities in the small high school. For example, after an intensive study of the characteristics of schools having enrollments of less than 300 pupils, the National Survey of Secondary Education concludes that size is a more important factor than improved practices and procedures in making for constructive differences among schools of less than 300 enrollment. (12: 235.) In other words, the most important thing that can be done to improve the quality of the educational offering in small high schools is to make the schools larger. Obviously this is a conclusion extremely significant to a consideration of the problem of creating adequate attendance or school units for high school purposes.

THE CONSOLIDATED SCHOOL: Recognizing the limitations of small schools, the educational authorities in many areas have consolidated schools, thus establishing larger schools and larger

attendance areas. At the present time nearly 7 per cent of all public schools in the nation are classified as consolidated schools, ranging from less than 1 per cent in Maine, Illinois, and Wisconsin, to 28 per cent in Indiana. The percentage of schools in each state that are the result of the consolidation of two or more schools is shown by states in Table XX.

TABLE XX

PERCENTAGE OF SCHOOLS FORMED BY CONSOLIDATION OF TWO OR MORE SCHOOLS IN VARIOUS STATES, 1930\*

STATES WITH COMMON SCHOOL DISTRICT ORGANIZATION		STATES WITH THE TOWNSHIP ORGANIZATION		STATES WITH THE COUNTY ORGANIZATION	
Arizona	12.5	Connecticut <sup>4</sup>	—	Alabama	11.2
Arkansas	6.6	Indiana	28.0	Florida <sup>4</sup>	—
California	2.3	Maine	0.6	Georgia	15.0
Colorado	5.2	Massachusetts <sup>4</sup>	—	Kentucky	2.5
Idaho	2.7	New Hampshire	1.5	Louisiana	10.6
Illinois <sup>1</sup>	0.8	New Jersey	2.4	Maryland	17.6
Iowa <sup>2</sup>	3.2	Pennsylvania	4.9	New Mexico	3.6
Kansas	1.9	Rhode Island	5.0	North Carolina	16.3
Michigan <sup>2</sup>	3.1	Vermont	3.6	Tennessee	14.8
Minnesota	4.5	West Virginia <sup>3</sup>	5.2	Utah <sup>4</sup>	—
Mississippi	17.3			Virginia	14.5
Missouri	4.1			Median	14.8
Montana	1.9			STATES WITH STATE SYSTEMS	
Nebraska	1.1			Delaware	15.4
Nevada	4.2				
New York	4.4				
North Dakota <sup>2</sup>	8.7				
Ohio	8.9				
Oklahoma	7.6				
Oregon	4.8				
South Carolina	10.0				
South Dakota	19.8				
Texas	12.6				
Washington	15.3				
Wisconsin	0.9				
Wyoming	8.7				
Median	4.7		5.1		

\*Derived from references 25 and 10.  
<sup>1</sup>Township system for high schools.  
<sup>2</sup>Partly township system.  
<sup>3</sup>Magisterial district.  
<sup>4</sup>No data.

The extent to which these schools approach desirable standards as to size is of primary importance in a study of the status of attendance units. Available data indicate that although many consolidated schools do not have a sufficient number of pupils to provide economically adequate educational advantages, they are far larger than are typical rural schools. The size of representative consolidated schools can be seen from the following data concerning eight consolidated districts, each having consolidated schools in Story County, Iowa. In 1928, the greatest number of pupils enrolled in the first eight grades of any of these schools was 288 and the smallest, seventy-nine. In the high school, grades nine to twelve, the largest number of pupils in any school was ninety-six, while the smallest number was nineteen. None of these schools had a sufficient number of high school pupils to meet the minimum standards with regard to size. Furthermore, although one-half of them did not have enough pupils to maintain the minimum size satisfactory elementary school, the smallest school was about three times as large as the average rural elementary school in the State of Iowa. (27.)

Other data presented in Table XXI show that the average elementary school of the 237 consolidated schools studied had 204 pupils enrolled, only thirty-six pupils less than the standard size. On the other hand, the average high school had seventy-six enrolled, which is at least 100 pupils below the standard size. Although about half of the elementary schools are below standard size, not more than a dozen of these schools are as small as the average rural elementary school which has only forty-three pupils. So far as the high schools are concerned only 16 per cent are large enough to meet the minimum standard. Such facts indicate that many consolidated elementary schools have been planned without reference to adequate standards as to size, and that the high schools are rarely planned to meet even the minimum acceptable standard.

It has been shown that it is a function of the local unit of school administration to provide certain services pertaining to the business and educational administration of the schools, supervision of instruction, health supervision, and administration and supervision of the school census and attendance. On

TABLE XXI  
DISTRIBUTION OF 237 CONSOLIDATIONS BY ENROLLMENT AND  
AVERAGE DAILY ATTENDANCE\*

NUMBER OF PUPILS	NUMBER OF CONSOLIDATIONS			
	<i>Distribution by Ele- mentary Enrollment</i>	<i>Distribution by Elemen- tary Daily Attendance</i>	<i>Distribution by High School Enrollment</i>	<i>Distribution by High School Daily Attendance</i>
Less than 30	2	3	28	32
30- 59	11	13	53	50
60- 89	14	17	56	56
90-119	17	20	35	23
120-149	29	21	15	11
150-179	21	29	7	5
180-209	28	19	5	6
210-239	15	18	7	2
240-269	25	18	2	1
270-299	11	10	0	0
300-399	28	20	5	6
400-499	14	7	3	4
500-599	11	7	2	1
Above 600	11	9	6	4
Total	237	211	224	201
Median	204	180	76	65

\*1:37.

the assumption that these services should be provided under the administration of a school board that has control of all the schools served, at a cost that bears a reasonable relationship to the total current cost of the educational program, it has been shown that the local unit of school administration should have an absolute minimum of 1,600 pupils and forty-six teaching positions and a desirable minimum of approximately 9,800 pupils and 240 teaching positions. We now consider the extent to which local administrative units meet the standards as to size.

## ADMINISTRATIVE UNITS OR SCHOOL DISTRICTS

The states have set up seventeen rather prevalent kinds of school districts. These districts may be classified into two types. The first type consists of those districts whose boundaries are coterminous with the boundaries of political subdivisions such as the municipality, the town or township, and the county. The second type consists of those districts whose boundaries are not necessarily coterminous with the boundaries of any political subdivision and which are generally classified as common or local school districts. For convenience the states may be divided into three groups: (1) Those that most frequently have made the school district coterminous with the political town or township; (2) those that have made the school district coterminous with the county; and (3) those that employ the common school district type.<sup>1</sup> (10.) In the first two groups the districts are of the first type, and in the third, of the second type. In some states all types of school districts are found and in such cases the state is classified according to the dominant type of district. Such a classification has been made in arranging Tables XXII and XXIII,<sup>2</sup> A summary of the data for all states is given in Table XXII with a general summary in Table XXIII. From these tables certain pertinent facts are to be observed:

1. In states that use the county as the school district there is an average of 145 districts per state as compared with 625 districts in states where the school district conforms to the town or township, and 4,590 districts in states where the common school district prevails. In other words, in the states that use the common school district as the administrative unit there is an average per state of seven times as many districts as in the town or township states, and nearly thirty-two times as many as in the county unit states.

<sup>1</sup>Independent city districts are found under all these groups. In general, the city district is coterminous with the boundaries of the municipality, but it may be of the common district type.

<sup>2</sup>It will be noted that Delaware is placed in a category by itself. Although the state is largely the unit of support and control, there are in Delaware one city school district and thirteen special districts in addition to the state unit.

TABLE XXII

NUMBER OF SCHOOL ADMINISTRATIVE UNITS OF ALL TYPES, SCHOOL BOARD MEMBERS, AND TEACHING POSITIONS\*

PART I. STATES THAT HAVE TOWN OR TOWNSHIP ADMINISTRATIVE ORGANIZATION

STATE	NUMBER OF ADMINISTRATIVE UNITS	AVERAGE AREA OF UNIT IN SQUARE MILES	AVERAGE NO. OF UNITS PER COUNTY	TOTAL NO. OF SCHOOL BOARD MEMBERS	TOTAL NO. OF TEACHING POSITIONS	AVERAGE NO. OF TEACHING POSITIONS PER UNIT
Connecticut	161	30	20	1,168	9,811	61
Indiana	1,292	28	14	2,700	21,847	17
Maine	518	58	32	1,600	6,191	12
Massachusetts	355	23	25	1,600	26,203	74
New Hampshire	244	37	24	834	2,961	12
New Jersey	552	14	26	4,218	25,404	46
Pennsylvania	2,587	17	38	13,567	57,716	22
Rhode Island	39	27	8	201	3,900	27
Vermont	94	97	6	835	2,825	30
West Virginia <sup>1</sup>	450	53	8	1,379	15,837	35
Total	6,292	28	21	28,102	172,695	27

PART II. STATES THAT HAVE COUNTY ADMINISTRATIVE ORGANIZATION

Alabama	112	547	1.6	566	16,567	148
Florida	67	818	1.0	201	10,547	157
Georgia	272	215	1.6	1,360	19,071	70
Kentucky	384	104	3.2	2,121	15,323	40
Louisiana	66	688	1.0	600	12,173	184
Maryland	24	414	1.0	101	8,461	353
New Mexico	98	1,250	3.1	490	3,400	35
North Carolina	200	244	2.0	900	23,375	117
Tennessee	194	215	2.0	1,160	17,695	91
Utah	40	2,055	1.3	205	4,452	111
Virginia	125	322	1.2	650	16,477	132
Total	1,582	377	1.8	8,354	147,541	93

\*10: 4-5.

<sup>1</sup>Magisterial district.

TABLE XXII—CONTINUED

PART III. STATES THAT HAVE DISTRICT ADMINISTRATIVE ORGANIZATION<sup>2</sup>

STATE	NUMBER OF ADMINISTRATIVE UNITS	AVERAGE AREA OF UNIT IN SQUARE MILES	AVERAGE NO. OF UNITS PER COUNTY	TOTAL NO. OF SCHOOL BOARD MEMBERS	TOTAL NO. OF TEACHING POSITIONS	AVERAGE NO. OF TEACHING POSITIONS PER UNIT
Arizona	500	228	35	1,485	3,163	6
Arkansas	3,193	16	42	19,159	12,574	4
California	3,589	43	62	11,204	36,768	10
Colorado	2,041	59	32	6,199	9,744	5
Idaho	1,418	59	32	4,560	4,500	3
Illinois <sup>3</sup>	12,070	5	118	38,635	47,766	4
Iowa <sup>4</sup>	4,870	11	49	21,181	24,585	5
Kansas	8,747	9	83	26,580	19,141	2
Michigan <sup>4</sup>	6,965	8	83	22,500	33,735	5
Minnesota	7,773	10	89	26,115	22,169	3
Mississippi	5,560	8	67	18,322	15,138	3
Missouri	8,764	8	77	29,310	24,200	3
Montana	2,439	60	43	7,630	6,033	2
Nebraska	7,244	11	77	22,873	14,727	2
Nevada	266	413	15	847	794	3
New York	9,467	5	152	<sup>5</sup> 15,000	74,961	8
North Dakota <sup>4</sup>	2,228	31	42	6,992	8,410	4
Ohio	2,043	20	23	10,938	41,432	20
Oklahoma	4,933	14	64	15,017	19,807	4
Oregon	2,234	43	62	6,678	6,208	3
South Carolina	1,792	17	39	5,384	13,393	7
South Dakota	3,433	22	49	11,021	8,943	3
Texas	7,932	33	31	28,414	35,667	4
Washington	1,792	37	46	5,400	11,140	6

<sup>2</sup>Some of these states have partially developed or optional unit systems.

<sup>3</sup>Township system for high schools. <sup>5</sup>Roughly estimated by Office of Education.

<sup>4</sup>Partly township system.

TABLE XXII—CONTINUED  
PART III. STATES THAT HAVE DISTRICT ADMINISTRATIVE ORGANIZATION<sup>2</sup>

STATE	NUMBER OF ADMINISTRATIVE UNITS	AVERAGE AREA OF UNIT IN SQUARE MILES	AVERAGE NO. OF UNITS PER COUNTY	TOTAL NO. OF SCHOOL BOARD MEMBERS	TOTAL NO. OF TEACHING POSITIONS	AVERAGE NO. OF TEACHING POSITIONS PER UNIT
Wisconsin	7,662	7	107	24,679	20,239	3
Wyoming	400	244	17	1,330	2,981	7
Total	119,355	18	62	387,453	518,218	5

PART IV. STATES WITH STATE ORGANIZATION

Delaware <sup>6</sup>	15	131		65	1,420	95
Total U. S.	127,244	23	42	423,974	839,874	7

<sup>2</sup>Some of these states have partially developed or optional unit systems.  
<sup>6</sup>Including Wilmington and 13 special districts.

TABLE XXIII

AVERAGE NUMBER OF ADMINISTRATIVE UNITS, SCHOOL BOARD MEMBERS, AND TEACHING POSITIONS PER STATE CLASSIFIED BY PREVAILING TYPE OF UNIT\*

TYPE OF UNIT PREVAILING	AVERAGE NUMBER OF ADMINISTRATIVE UNITS PER STATE	AVERAGE AREA IN SQUARE MILES PER STATE	AVERAGE NUMBER OF SCHOOL BOARD MEMBERS PER STATE	AVERAGE NUMBER OF TEACHING POSITIONS PER STATE	AVERAGE NUMBER OF TEACHING POSITIONS PER UNIT
State (1 State) <sup>1</sup>	15	131	65	1,420	95
County (11 States)	145	377	760	13,412	93
Town or Township (10 States)	629	28	2,810	17,243	27
District (26 States)	4,590	18	15,094	19,931	5
Average, Including all Types for United States	2,651	23	8,937	17,497	7

\*10: 4-5.

<sup>1</sup>Delaware, which includes the city of Wilmington and 13 special districts.

2. The average area per district in states that employ the county as the school district is 377 square miles as compared with twenty-eight square miles for the town or township systems and eighteen square miles for the common district system.

The county systems are, therefore, thirteen and twenty-one times as large in area as the township and common district systems respectively.

3. The states where the county forms the school district have an average of only 1.8 districts per county as compared with twenty-one and sixty-two, respectively, for states having the township and the common district.<sup>3</sup>

4. In the entire United States there are 127,244 local units of school administration, controlled by 423,974 school board members. In the county unit states there is an average of one board member to each 17.7 teaching positions as compared with one to 6.1 in township states and one to 1.3 in common district states. In ten states there are more school board members than there are teachers, and for the entire country there are half as many board members as there are teaching positions.

5. In the county school systems there is an average of ninety-three teaching positions per district in comparison with only twenty-seven and five, respectively, for the township and the common district systems.

Certain significant conclusions can be drawn from the facts cited above. In the first place, the number of school board members is out of all proportion to the number necessary for the administration of schools. It was shown in Chapter III that the number of school board members per administrative unit should be from five to nine, and in Chapter IV that the minimum number of teaching positions per administrative unit should be forty-six with a desirable minimum of 280. Accordingly, the lowest permissible ratio of school board members to teachers is one to five, and the lowest desirable minimum, one to thirty-one. Measured by these standards the average common school district is entirely unsatisfactory and the township can barely qualify.

In the second place, a large majority of the administrative units now employed are too small to perform the necessary administrative and supervisory services. The average township school district system in the country has only about one-half

<sup>3</sup>The reason for county systems having an average of more than one district per county is that most of the states provide for independent city school districts.

the required number of teaching positions to maintain a standard organization of schools. This indicates that at least 50 per cent of the townships do not have the requisite number of pupils to maintain an adequate standard of educational facilities or to furnish economically the necessary administrative and supervisory services. The average common school district has only five teaching units, and a large majority have only one teacher each. The average county school system has ninety-three teaching units, or about twice the absolute minimum number requisite to standard school facilities and adequate administrative and supervisory services. It seems safe to conclude, therefore, that insofar as the requisite number of pupils is concerned, the county and city are the only two existing political units of sufficient size to be used satisfactorily as a basis for the administration of schools. Even so, in general, cities or counties of less than 7,500 population are not sufficiently large to constitute separate school districts.<sup>4</sup>

From the foregoing statement it should not be concluded that the county is always a satisfactory unit for school administration. In a study of the schools of the seventy-five counties of Arkansas it was shown that sixty-nine counties contain territory from which children should attend school in another county. (9.) In Louisiana special provision is made in the state law for the transportation of children from one parish to another, and payment of their tuition by the board of the parish in which they live. This condition is necessary because attendance district boundaries and the parish boundaries rarely coincide. A study of the population distribution in most states will reveal that some counties are too small to be organized as school districts and that a consolidation of counties is necessary if schools are to be adequately and economically administered. It is estimated that from two-thirds to three-fourths of the counties could be satisfactorily used as units for school administration. This is a much greater proportion than is estimated for any other existing political unit. It would probably be difficult to find a city whose corporate limits would be satisfactory

<sup>4</sup>Based on the assumption that the school enrollment will constitute about one-fifth of the total population.

as the boundaries of a school district because in practically every case it is desirable and necessary to include suburban and surrounding territory in the city school district.

The data and discussion presented above seem to justify the conclusion that the territory of the state should be organized into school districts independent of the boundaries of any political subdivision. If because of constitutional or legal requirements it is found more feasible to use some of the existing political subdivisions as school districts, only such units as have a population of 7,500 or more are generally acceptable.

NUMBER AND TYPES OF LOCAL UNITS OF SCHOOL ADMINISTRATION: The great variety of types of school district organization to be found throughout the country and even within the same state is the result of expediency rather than carefully developed principles and plans. These varied organizations are examples of the fact that the states have left the formation of local districts to local control and have built up a patchwork of administration that is extremely difficult to analyze. Engelhardt and Zeigel have the following to say concerning the chaotic formation of local units of control: (11: 76)

Factors like improved highways, changes in means of transportation, social movements affecting population growth, and modern methods of doing business are constantly building up some areas of a state and destroying others. Shifts in resources and population are continuously under way in all states. Many small towns are growing smaller, and cities more strategically located are rapidly extending their boundaries. Areas that once supported many families are practically uninhabited. It is fundamentally unsound to allow local areas to have complete control of the nature of the districts and schools to be operated when changes of the kind referred to are continuously in progress. School district organization cannot remain static and unchanging under such circumstances. Educational problems must be viewed not solely for their local application but must find their solution through studying them in relationship to the state as a whole.

In the past, even though the principle that "education is a state function" was generally accepted, the state's educational program had been considered too largely from the local point of view. It was assumed that the school offering must be adjusted to the prevailing separate administrative divisions, even though there was no justification for many of the school districts in existence. Educational leadership has frequently overlooked the fact that the legislature in creating a school district system did so to provide the educational services needed at that time, and that the legislature continues to have the power to modify the school district system in such ways as will provide public education of the type and form needed today.

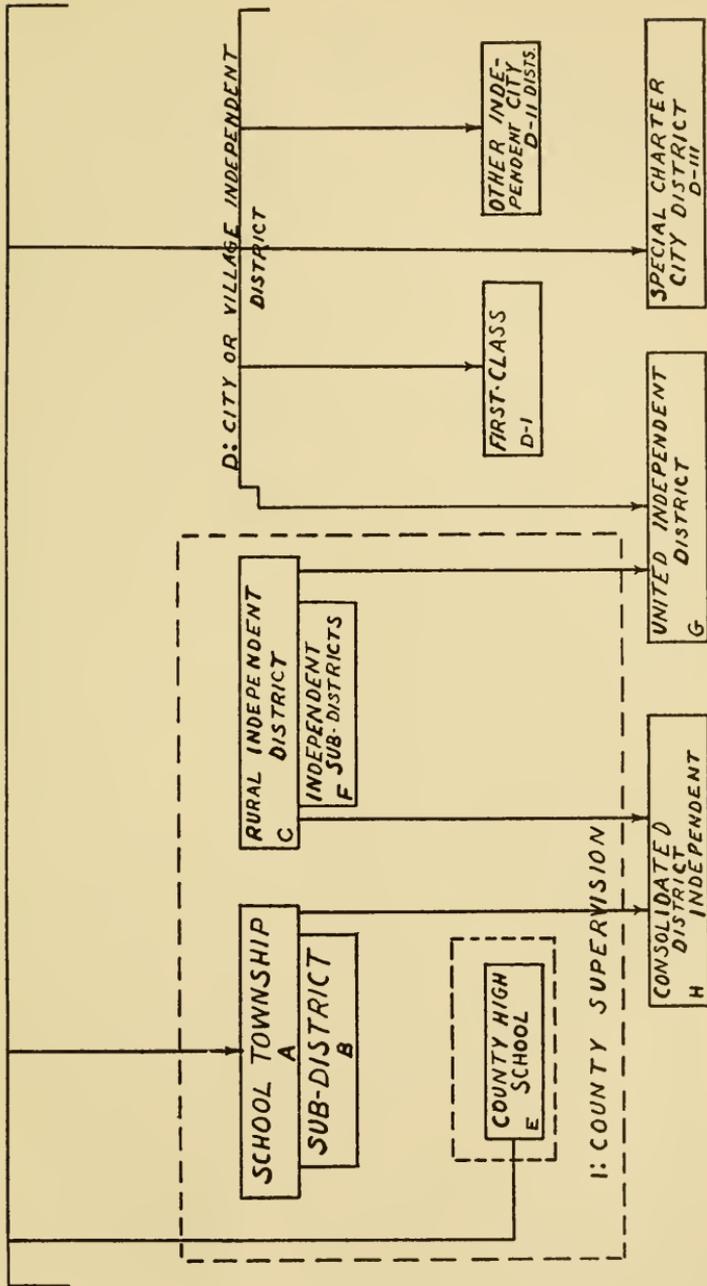
An example of the multiplicity of school districts is afforded by Iowa where there are eleven distinct types of school districts, all but two of which are corporate in character. (15: 83-84.) School townships, rural independent districts, and county high schools are all under the supervision of the county superintendent, but each has its own individual board of control. All other types are independent of county supervision. These districts vary in the manner of their formation and in the powers of their boards of directors. Presumably the consolidated, city, and independent districts each have a sufficient number of pupils to justify the furnishing of administrative and supervisory services independent of the county. As a matter of fact, data concerning these independent and city districts show that many of them are not even large enough to maintain satisfactory schools, much less capable of furnishing adequate administrative services. (See Chart V and accompanying discussion.)

Another example of the confusing variety of school districts was found in Arkansas prior to 1931. In this state there were seven different kinds of school districts: (1) the common school district with three directors; (2) the special or single school district in an incorporated town or city, with six directors; (3) special school districts formed by a special act of the legislature, which could have any number of school directors, and could possess any kind of powers that were enumerated in the laws creating the district; (4) the rural special district having six directors, and formed from the territory of one or more common school districts other than incorporated towns and cities; (5) consolidated school districts organized from the territory of one or more districts under six directors; (6) districts formed by the consolidation of territory from two or more counties; and (7) a county unit district. An example of the varied powers possessed by the districts is to be seen in the power to issue bonds. Some of these districts had unlimited powers to issue bonds by the authority of the school board, others could issue bonds only upon authorization by a vote of the people, and others could not contract any kind of indebtedness. (9: Chapter V.)

In West Virginia prior to 1933 the magisterial district (township) usually constituted the corporate school district. Within these magisterial districts there might be sub-districts with power to levy a special tax for maintaining more than a nine-month term. Separate taxes were levied for high schools and elementary schools. Outside the sub-districts it was possible to have only an eight-month elementary school term, while it was possible in all cases to have a nine-month high school term. Thus, there could be found an elementary and a high school in the same building where the elementary school closed at the end of eight months and the high school continued for nine months. In addition to these arrangements some cities had been granted independent charters giving them special powers and authority denied other districts. (7: 18-19.)

Apparently there is no justifiable reason why all districts should not be put on the same legal basis as to privileges and powers, and duties of the electors and of the school boards. The legislature might be justified in classifying all school dis-

CHART V  
 SCHOOL DISTRICT ORGANIZATION OF THE STATE OF IOWA  
 (CHART BY L. O. JOHNSON 15: 83-84)\*



## Notes in Explanation of Chart V

(By L. O. Johnson 15: 83-84)

The statements recorded after each code letter (A, B, C, etc.) refer to the class of school district designated in the corresponding diagram.

Page and section reference are to State of Iowa 1925 School Laws with annotations and decisions, by May E. Francis, Superintendent of Public Instruction. Published by the State of Iowa, Des Moines.

A: All school corporations composed of sub-districts are school townships and are invested with full corporate powers.

The board of directors consists of three members in non-districted townships. In other townships the board is composed of one director from each sub-district. The board of directors divides the township into sub-districts. (Sec. 4124, p. 58; Sec. 4123, p. 57; Sec. 4212, p. 88; Sec. 4126, p. 59.)

B: The common sub-districts are not corporate and have one director each, who has very limited powers under township supervision. (Sec. 4126, p. 59; Sec. 4234, p. 97.)

C: The rural independent district has corporate powers and is independent of the township board. There are five directors in each district of more than five hundred population, and three directors in all other districts.

After the consolidation of independent districts in a township, the remaining portions become rural independent districts. Rural independent districts may revert to the township form of organization. (Sec. 4151, p. 69; Sec. 4123, p. 57; Sec. 4150, p. 68; Sec. 4198, p. 84; Sec. 4174, p. 77.)

D: All city or village independent districts have full corporated powers. Any city, town, or village having over one hundred residents may take steps to become an independent district. Moreover, a sub-district containing a village with a population of seventy-five or more may organize as an independent district.

D-I: City districts of the first class have seven directors.

D-II: City districts with special charters have seven directors.

D-III: All other city districts have five directors. (Sec. 4123, p. 57; Sec. 4141, p. 64; Sec. 4143, p. 66.)

E: County high schools are not a distinct corporate district and are under the authority of the county supervisors. The board of trustees consists of six members. (Sec. 4076 and Sec. 4077, pp. 46 and 47.)

F: The Iowa law permits the independent districts to divide further into sub-districts, which have no corporate powers. (Sec. 4152, p. 69.)

G: The united independent district, organized from contiguous territory, is endowed with full corporate powers. If the district has a population of over five hundred, it has a board of five directors. (Sec. 4153, p. 69; Sec. 4123, p. 57; Sec. 4198, p. 84.)

H: The consolidated independent district appears to differ from the united independent district only in method of organizing. It must embrace an area of not less than sixteen sections of contiguous territory.

If it has a population of over five hundred it has a board of directors consisting of five members. (Sec. 4154, p. 70; Sec. 4153, p. 69; Sec. 4156, p. 71; Sec. 4198, p. 84.)

I: The county supervisory organization is not a corporate subdivision. It is controlled by a county board of education consisting of the county superintendent and six others. The county board in Iowa selects the textbooks to be used in its county and the county auditor apportioned school funds. The county superintendent has no supervisory power over city and independent districts. (Sec. 4119, p. 46; Sec. 4122, p. 57; Sec. 4396, p. 140.)

tricts according to size, and might require certain services to be provided in districts of one size that might not be needed in another. However, most of the conglomeration of school district arrangement does not bear any evidence of such logical classification.

As pointed out previously, the wide variety in type and size of school administrative units is productive of great inequalities in the ability to finance schools. The resulting inequalities in educational opportunities are clearly indicated by lack of proportion in expenditures per child, length of school term, value of school property, teachers' salaries, and the lack of desirable administrative and supervisory services.<sup>5</sup> For instance, in the State of Iowa, a small district state, the richest district is 275 times as able to support schools as the poorest. The comparative wealth of poor districts and rich districts in other states reflects similar conditions.<sup>6</sup> An example of the great inequalities in local ability to support schools in Arkansas is indicated by the data in Table XXIV.

Furthermore, small administrative units greatly lessen the probability of expert administration, supervision of instruction, health service, and attendance service. Wherever such services have been provided they are usually inadequate and are superimposed by larger units of government such as the county, the supervisory district, or the state, and are organized in violation of the principle of unity of administrative responsibility and authority through a single local board of education. In all such cases the children usually pay the price through inadequate educational service.

#### DEVICES FOR OVERCOMING THE LIMITATIONS OF SMALL ADMINISTRATIVE UNITS

Numerous plans have been adopted in various states for overcoming the limitations of the small local unit of school administration, or the school district. A more detailed descrip-

<sup>5</sup>The diversity in the ability of local units to finance schools is especially significant in view of the fact that in the United States more than 70 per cent of the total public support of schools comes from local district taxation.

<sup>6</sup>Some of the ratios of wealth are, Arkansas 1 to 36; Colorado, 1 to 184; Idaho, 1 to 183; Illinois, 1 to 181; Michigan, 1 to 202; Missouri, 1 to 211; New Jersey, 1 to 252; Pennsylvania, 1 to 240.

TABLE XXIV  
RELATIVE ABILITY OF ARKANSAS SCHOOL DISTRICTS TO  
PAY FOR SCHOOLS, 1927-28\*

SIZE OF DISTRICT ACCORDING TO AVERAGE NUMBER PUPILS	NUMBER DISTRICTS OF EACH SIZE	TOTAL PUPILS ENROLLED IN ALL DISTRICTS OF GIVEN SIZE	ASSESSED VALUATION OF TAXABLE PROPERTY		
			<i>Total for All Districts of Given Size</i>	<i>Average of All Districts of Given Size</i>	<i>Av. Per Pupil in All Distr'ts of Given Size</i>
37	1,207	44,955	\$ 16,000,000	\$ 13,256	\$ 356
54	1,430	76,725	47,000,000	32,867	613
81	704	56,854	52,000,000	73,864	915
126	432	54,330	63,000,000	145,833	1,160
259	240	62,216	76,000,000	316,667	1,222
513	80	41,053	57,000,000	712,500	1,338
1,159	70	81,118	143,000,000	2,042,857	1,763
6,527	7	40,569	141,000,000	20,142,858	3,086
Av. 110				\$ 142,686	\$ 1,300
Total	4,170	457,720	\$595,000,000		

\*16: 16.

tion of these various devices and plans for overcoming the limitations of the small units of administration, which, it must be emphasized, are frequently coterminous with attendance units, is presented in the following paragraphs.

THE STATE AS THE UNIT: In some states there is a distinct tendency toward making the state the unit of support and administration. The state is divided into attendance districts, the boundaries of which are kept flexible and subject to such changes as may seem advisable. The control of many important matters is left to the authorities in the local districts, but the unit of taxation for school purposes is largely the state. Delaware is the state farthest advanced in this respect. (11: Part I, Chap. III, Sec. 7.)

THE COUNTY AS THE UNIT: In eleven states the small district plan has been almost entirely abandoned and the county

or at least a large part of it has become the local unit for school administration. Maryland with its twenty-three counties and the City of Baltimore, and Louisiana with its sixty-four parishes and two independent city school systems represent the best types of county school organization and administration. (11: Part I, Chap. III, Sec. 7.) In these states each county is a complete unit for local taxation and administration. The county is divided into attendance units for elementary and high school purposes. These attendance units are usually considerably larger than the attendance units in states that retain the common district type of organization. A reference to Table XVII will show that Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, New Mexico, North Carolina, Tennessee, Utah, and Virginia, all county unit states, have rural elementary schools that are for the most part from two to four times as large as the average rural elementary schools in the states that have common school districts.

Most of the states that are classified as county unit states have various exceptions as to district organizations, some of these exceptions tending to destroy the benefits of the larger administrative unit. In fact, Louisiana, Maryland, Utah, Florida, and Virginia are the only states having the county as the unit of school administration that have not to a large extent by exceptions and exemptions nullified the benefits of the county unit. Probably the best example of complete nullification of these benefits is furnished by Kentucky. In this state only sub-districts (attendance units) having fewer than 100 children are included in the county district. The result is that the centers of wealth are exempted from local support of rural schools. Consequently it is practically impossible to have standard size attendance units in rural areas, and many independent districts that are far too small for economical administrative units are created.<sup>7</sup> (10: 9-10 and 17: 61-2.)

THE TOWN OR TOWNSHIP AS THE UNIT: Ten states either have abandoned, or have never used the common school district system. They have adopted the town or township as the ad-

<sup>7</sup>This condition has been largely changed on the basis laid for changing it by the Kentucky School Code adopted 1934.

ministrative unit for schools. The New England States use the town, which is much the same as the township. Pennsylvania, West Virginia,<sup>8</sup> Indiana, and New Jersey use the township as the local administrative unit for schools. Many of these units are too small to constitute either satisfactory attendance or administrative units. For example, Massachusetts has 222 cities and towns that operate both elementary and high schools and which for the most part are sufficiently large to constitute satisfactory administrative units. However, it also has 128 towns in which only elementary schools are provided and which, of course, are too small to constitute satisfactory administrative units. Similar conditions for the other states could be cited. Consequently, the conclusion is obvious that every one of these ten states is in further need of reorganization of local school administrative units and a reduction in their number. (11: Part I, Chap. III.)

THE CONSOLIDATION OF ADMINISTRATIVE UNITS: A majority of the states that have the common school district type of organization have attempted to enlarge the size of the districts by consolidation rather than by changing the type of district organization. These consolidations, however, have been undertaken for the most part in an effort to establish larger schools rather than larger administrative units. The result has been that the enlargement of the administrative unit has been merely incidental to the enlargement of attendance units and the establishment of larger schools. Consequently the units thus established are, to a large extent, too small to meet the minimum standard as to size of administrative units.

Occasionally attempts have been made to create satisfactory administrative units as well as satisfactory attendance units. For example, in Lake County, Minnesota, all common school districts have been eliminated and the county made the administrative unit for schools. (11: Part I, Chap. III, Sec. 7.) In Pulaski County, Arkansas, forty-six rural school districts each constituting a separate unit for administration have all been abolished and consolidated into one administrative unit. The enlarged unit is divided into attendance units and, by the use

<sup>8</sup>In West Virginia the township is known as the magisterial district.

of transportation, high school as well as elementary school advantages are made available to all children in the county. (8.)

THE SUPERIMPOSED HIGH SCHOOL DISTRICT: Some states, of which Illinois, California, and Wisconsin are representative, have undertaken to overcome the limitations of small administrative units by the organization of separate districts for high school purposes only. Such districts are independent and separate administrative units as well as attendance units. They are made up of the territory of one or more elementary school units, each of which is also an administrative unit. Under this form of organization each of the elementary school districts has one board, and separate administrative and taxing powers. The high school district has another board and its own independent administrative organization.

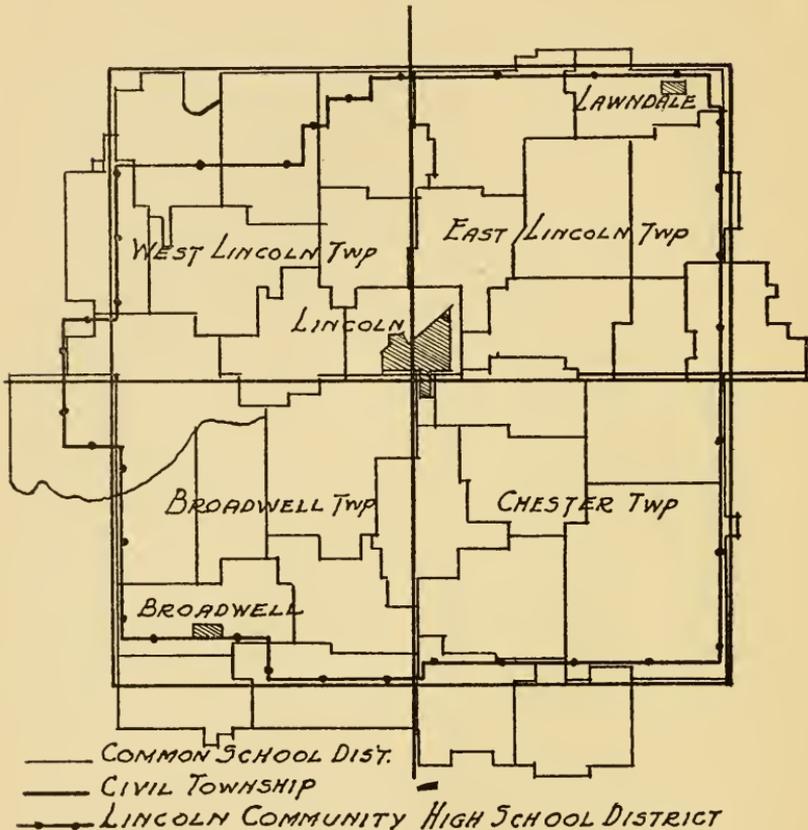
A typical illustration of the way high school districts are superimposed over the elementary school districts is to be seen in Figure I which shows a map of Lincoln Community High School District No. 404, Logan County, Illinois. (22: 32.) It will be seen that the boundaries of the high school district are not congruent with the boundary lines of the underlying school district. This plan of independent high school districts superimposed on elementary school districts is defective in the following respects: In practice it makes difficult and frequently impossible the organization of schools on the basis of six-grade elementary schools, junior high schools and senior high schools, or six-year high schools. Furthermore, the maintenance of elementary schools of proper size is almost entirely neglected and there is little or no cooperation between the elementary and high school districts.

In the second place, the superimposed high school district violates the accepted principle of unity of administrative control of a complete educational program by a single board of education. There are too many school trustees or board members handling school affairs, which results in inefficiency of administration.

In the third place, the superimposed high school district and numerous elementary districts result in great inequalities in the burden of school support, as is indicated by the wide variations in the tax rates necessary to support the elementary schools.

FIGURE I

## A COMMUNITY HIGH SCHOOL AND ITS UNDERLYING COMMON SCHOOL DISTRICTS



(From Reeves 22: 32)

Included within the boundaries of the community high school district here shown are found a part of all of each of the 34 underlying school districts located in eleven civil townships. Each of the 34 elementary school districts has its own board of education and levies a separate tax for elementary school purposes. The community high school district has a board which controls only the community high school, and levies a tax on all the territory included within the boundaries of the high school district, such tax being used for high school purposes only. Under such an arrangement it is entirely possible that children living in the same elementary district will not have equal access to high school advantages. Where the boundaries of the high school district divide the common school district some of the pupils live outside the high school area and some live inside. Pupils living outside the area who live in no high school district have to pay tuition to the high school district which they attend.

Some elementary districts levy no local tax at all, depending entirely upon state or county taxes, while others levy the limit of taxes permitted by law. Such variations in tax rate are made necessary by the great variations in the assessed valuation per child, or per teaching unit, in the districts. (11: Part II, Chap. II.)

Furthermore, the superimposed high school district system results in inefficient use of the funds for the support of schools. The large number of small elementary schools results in excessive cost of elementary education. Convincing proof of the inefficient use of funds resulting from the divided administration brought about by the superimposed high school district has been obtained by Engelhardt and Zeigel through a comparison of school costs in areas organized under the superimposed high school district plan with the school costs in areas organized under the unit plan (both elementary schools and high schools under a single board in the same taxing unit.) (11: Part III, Chap. II.) The logical explanation of the higher cost of general control in the separately organized school systems is that such systems have two or more boards of education and two or more administrative staffs.

COUNTY HIGH SCHOOL: Some states have undertaken to overcome some of the limitations of small administrative units by establishing county high schools which, so far as administration is concerned, are independent of all other schools and administrative units in the county. Such an organization resembles the superimposed high school districts of Illinois and California and is subject to most of the limitations of that system of administration.

The county high school system of Tennessee furnishes a good example of the limitations of the independent county high school type of organization and shows the weakness of a system that violates the principle of unity of administrative control and coordination. In this state one or more county high schools may be established in each county. These schools are entirely independent of all other school systems in the county and are supported by a county-wide tax. Certain cities and incorporated towns in Tennessee operate systems of public schools, including the high school, that are independent of county control, and en-

tirely separate from the county high school (11: Part I, Chap. III, Sec. 1.) In some of these cities both a city high school and county high school are maintained, and in such cases the children of the city may attend either school they choose. The laws provide that the superintendent of the elementary school in the town or city in which the county high school is located can be selected as principal of the county high school as well. The superintendent thus becomes responsible to two separate and independent school boards. Needless to say, under such an arrangement it is difficult to project a unified program in the elementary and high schools. Such an organization also makes it practically impossible to organize the schools on the basis of a six-year elementary school and a junior and senior high school organization.

**TUITION, TRANSPORTATION, AND DORMITORIES:** All states, with the possible exception of North Carolina, have made provisions for overcoming the limitations of small administrative units by permitting districts to pay the tuition and transportation of their pupils attending school in other districts. Some states, for example Mississippi and Montana,<sup>9</sup> have provided for the maintenance of dormitories for high school pupils from other districts. In such cases the board and tuition of the pupils are frequently paid by the home district of the pupil. These devices do but little to obviate the fundamental defects of small administrative or attendance units. Usually the only thing accomplished is the extending of high school advantages to some pupils that otherwise would not have had them. As in the case of the superimposed high school district, the elementary schools are neglected and there is little or no co-ordination of elementary and secondary education. (11: Part II, Chap. II.)

**SUPERIMPOSING ADMINISTRATIVE AND SUPERVISORY SERVICES:** Most of the states have found small school districts inadequate for administrative and supervisory purposes. The chief device for overcoming this limitation is the creation of the office of the county superintendent. Forty-four states main-

<sup>9</sup>In 1931 Mississippi had 46 and Montana had 19 such dormitories and there were 89 in all the states. (11: Part II, Chap. II.)

tain this office although only eleven states have the county unit system of schools. In twenty-eight of these states the county superintendent is elected by popular vote. In nine states there is a county board of education elected by the people, which in turn appoints the county superintendent. (19: 30.)

The system used in Arkansas is a fair illustration of this method of providing for the administration and supervision of small school districts. In Arkansas there is a county board of education of six members elected by popular vote, who in turn appoint the county superintendent of schools, whose qualifications are fixed by the state board of education. The board fixes the salary of the county superintendent, and determines the number and salaries of such assistants as he may need. The county superintendent has complete supervision of all schools outside the towns and cities having 2,500 population or more, subject to the rules and regulations of the state board of education. The county board of education through the county superintendent prepares and approves the budgets of the local school districts. The county board of education also has authority to change school district boundary lines and form consolidations, when authorized to do so by a majority of the qualified electors in the districts affected. Even in counties which have been consolidated into two or more large districts, each maintaining complete educational programs, it is still necessary to maintain this type of superimposed administrative and supervisory services in order to keep the cost of such services within reasonable bounds.<sup>10</sup>

An arrangement similar to the "county superintendency plan" is the plan of supervisory districts used in the State of New York. Territory outside the cities, and outside districts of 5,000 population or more which employ a superintendent of schools, are organized into supervisory districts. The school boards of the districts included in this supervisory unit meet and organize as a board of the supervisory district and elect a district superintendent. The state pays \$3,000 annually for the salary of each district superintendent. In addition, the board of

<sup>10</sup>In 1933, the legislature abolished the offices of county superintendent and county board of education, turning their work over to the political county court, and a part-time official known as the county examiner.

the supervisory district may cause the board of supervisors of the county to levy a tax for paying a higher salary. The district superintendent holds meetings of the district trustees and of the teachers in his district, conducts teachers' examinations, issues teachers' licenses, visits schools and supervises instruction, makes statistical reports to the state department of education, directs school trustees in the keeping of school property in usable and safe condition, and advises with school trustees in whatever matters they may seek his advice. (20: 124-34.)

None of these plans of superimposed administrative and supervisory services provides for centralized control and responsibility. In some states the county superintendent is elected by popular vote and does not have a board under which to work. This system of electing superintendents has been condemned by practically every educational authority in the country. In other states the county board of education is superimposed over the local district boards and the county superintendent is responsible to the county board of education. However, the district boards have relatively little responsibility either to the county board or the county superintendent. In many cases the county superintendent and the county board of education have nothing to do with the selection of teachers, the instruction of the school children, or the planning of the educational program, and merely serve in an advisory capacity.

#### LARGER LOCAL UNITS AND CENTRALIZATION OF AUTHORITY

Most of the states have been over-zealous in maintaining direct local control of schools. Because such a large number of districts are too small to be financially able to furnish expert leadership and the necessary administrative and supervisory services, such leadership and services have been imposed from the state, or from some other larger political unit. The superimposition of the county superintendent and the district superintendent and the supervisory district are illustrations of this point. The rapid increase in the number of supervisors from the state departments and the enactment of laws and regulations controlling the actions of the local districts are the direct result of weak local units. The establishment of larger and more efficient units of local administration is a long step toward the

desirable decentralization of administration and supervision of public schools. Decentralization can take place only when the local units are able to provide an organization and leadership capable of administering the minimum standard educational program. In practically every state the larger city school districts are not subject to the authority of extraneous administrative and supervisory officials and therefore exercise almost complete local autonomy in the administration of school affairs. Small districts cannot exercise such autonomy because they are not able to perform the educational functions the state has a right to require. Therefore, the creation of larger and more efficient units of school administration is a practical device for maintaining a proper balance between local and state government, and is the only policy in keeping with decentralization of power. (21: 8-9.)

#### SUMMARY

This chapter presented the principal facts concerning the status of attendance and administrative units as studied in the light of the criteria established in prior chapters. There is much evidence to show the general inadequacy of both kinds of units.

The attendance units of areas outside communities having a population of 2,500 or more are rarely large enough to meet the minimum standards as to size. The typical rural elementary attendance unit has one or two teachers, twenty-five to fifty pupils, and eight grades of work. The typical rural high school has fifty to 100 pupils and three to six teachers. When it is taken into consideration that a standard elementary school should have an approximate minimum of 240 pupils, and a standard high school an absolute minimum of 200 pupils and a desirable minimum of 300 pupils, the deficiency of schools in rural areas is clearly evident. The resulting limited educational opportunities can be removed, for the most part, only by the creation of larger schools and attendance units. The remedy for the deficiencies of small schools has frequently been the consolidation of schools. In general, consolidated elementary schools are far more nearly of standard size than rural schools, but approximately half of them are below standard as to size.

Probably not more than one out of every six consolidated high schools is of standard size or is large enough to offer adequate educational opportunities at an economical cost.

A large majority of local units of school administration have fewer than 1,600 pupils and are, therefore, too small to perform at a reasonable cost the functions and services required of them. These units may be classified as (1) county units, (2) town or township units, and (3) common school district units. Of these three kinds of organizations the only one that is sufficiently large to constitute a satisfactory local administrative unit is the county, since this unit has an average of ninety-three teaching positions as compared with twenty-seven for the town or township and five for the common district type. If local administrative units are to be made coterminous with political subdivisions, the only subdivisions that are large enough to serve satisfactorily are counties, townships, and cities, provided each such subdivision has a minimum of approximately 7,500 population.

The great variety of administrative units has resulted in inequalities in the ability to support schools, as indicated by inequalities in expenditures per child, length of school term, value of school property, salaries of teachers, and the lack of administrative and supervisory services.

Many devices for overcoming the limitations of small administrative units have been adopted, the chief of which are: (1) making the state the unit, (2) making the county the unit, (3) making the township the unit, (4) consolidating small units, (5) superimposing high school districts over the small elementary school districts, (6) establishing county high schools, (7) providing tuition, transportation, and dormitories, and (8) superimposing administrative and supervisory services through some larger unit such as the county, the supervisory district, or the state. Of these devices, only the organization of the county as the administrative unit has resulted generally in units of standard size. In most cases, however, exemption of cities and other large communities from the county unit has practically nullified its possible benefits. The device of superimposing high school districts is defective because it results in poor educational organization, poor adminis-

trative organization, inequalities of financial burdens, and inefficient use of educational funds. The superimposed high school district, the county high school, and the superimposed administrative and supervisory services are all devices which are in violation of the principle of unity of administration for a complete program of elementary and secondary education.

Much of the present chaotic condition in the organization of local administrative units results from a mistaken idea of home rule or local autonomy which has resulted in a much higher degree of centralization of authority than would result from adequate local units.

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## CHAPTER VI

### THE REORGANIZATION OF LOCAL SCHOOL UNITS

The reorganization of local school units involves both internal and external reorganization. As indicated in the first chapter, internal reorganization involves the creation and organization of attendance units and the consolidation and location of schools, while external reorganization involves the creation and organization of administrative units which are composed of one or more attendance units. In states or areas where the administrative unit or district comprises some large area such as the county, the major problem is that of internal reorganization. In states or areas where the small local district, or the system of superimposed and overlapping districts is in use, both external and internal reorganization are usually necessary. In order, therefore, to clarify the discussion these two distinct problems will be treated separately.

#### REORGANIZATION OF ATTENDANCE OR SCHOOL UNITS

As previously pointed out, the establishment of attendance or school units, or the reorganization of existing units, should be done upon the basis of an analysis of their function. Such an analysis has been made in Chapter II, and certain standards or criteria developed which are here summarized for guidance in the procedure of reorganizing attendance units.

1. The organization of schools.
  - a. The school system should furnish at least twelve years of instruction to all children mentally and

physically capable of profiting by that amount of instruction.<sup>1</sup>

- b. The school should be organized on the basis of a six-year elementary school, a three-year junior high school and a three-year senior high school, or a six-year high school.

## 2. Size of schools.

In order to provide adequately for the needs of society and the various individuals of the school population through a sufficiently broad and comprehensive curriculum the schools should be of the following minimum sizes:

- a. Each elementary school should have a desirable minimum of approximately 280 pupils and seven teachers, or an absolute minimum of about 240 pupils and six teachers.
- b. Each high school should have a desirable minimum of approximately 300 pupils and ten teachers, or an absolute minimum of approximately 200 pupils and seven teachers. For separately organized junior high schools the number of pupils can be approximately 350 pupils for a ten-teacher school and 245 for a seven-teacher school. For a separately organized senior high school the numbers can be 250 and 175, respectively.
- c. In the practical application of these standards it may become necessary to modify them. In all cases where it is practicable, larger schools than those required by the above standards should be estab-

<sup>1</sup>Some persons may be inclined to question the adequacy of this standard in that it does not call for kindergarten and junior college facilities. The standard here stated is intended to be a minimum, not to the exclusion of such opportunities. Any district that has enough children for an adequate elementary school has enough for kindergarten if the district is able to pay for it. Hence this standard can be made to comprehend kindergartens. As to junior colleges, until vast areas of many states have adequately organized elementary schools and high schools and have given them adequate financial support, it does not appear to be compatible with the democratic idea of public education to include the upward extension of junior college education as a universal minimum standard of educational opportunity.

lished. Where the topography of the country, road conditions, and the community life of the different areas make a smaller school desirable or necessary, schools smaller than those called for by the minimum standards must of necessity be established,<sup>2</sup>

### 3. Location of schools.

- a. The general topography of the country including streams and other natural barriers, as well as the present and probable future condition of the roads, should be considered as determining factors in the location of schools.
- b. The existence of community lines and community activities should be considered as determining factors in the location of schools. Where the removal of the school would do too great violence to certain well-established community enterprises and activities a school should not be removed, although it may not meet the standards of the minimum size of schools.
- c. Schools should be located in relatively permanent centers of population. Permanency of population is to be judged not alone by the growth of population in the past, but also by present factors that will probably influence the stability, growth or

<sup>2</sup>One of the functions of a school district is to combine individuals and groups in such way that the development of educational activity is facilitated because of a stimulating integration of the educational and social interests of those individuals and groups.

According to Butterworth, "Any combination of territory is not sufficient; the quality of such combination is not infrequently of even greater significance in determining the local school unit." (1: 150.) This principle involves the consideration of the combination of groups which because of racial and social or economic differences cannot be combined without jeopardizing the proper functioning of a desirable educational program. Mere superficial differences and prejudices are not determining elements in such cases. The acceptance of such essential differences should come only as the result of the advice of recognized and intelligent local leadership and the recommendation of qualified educational and sociological experts.

These standards do not imply that every combination of territory that can maintain full twelve years of work is to set up a separate and independent school district for purposes of administration and supervision. (1: 45-56.)

decline of population in the future. It frequently happens that the presence of some particular factor, such as a local industry and the likelihood of its removal, will be a more reliable index to the future population development than any statistical device.

- d. Schools should be located near the principal center of population so as to be convenient to the maximum number of pupils affected, and on the most suitable site available. Transportation at public expense should be kept at a minimum by the location of the school building in such way as to permit the maximum number of children to walk to school.
  - e. If it can be demonstrated that in the long run the abandonment of usable school houses will be more economical, the present buildings should be abandoned without regard to their present conditions, and new buildings on new locations provided.
4. Transportation of pupils.
    - a. Transportation at public expense should be provided for all pupils who live too far from the school to walk conveniently. In general, transportation should be provided for all children who live more than two miles from the school. Probable modifications of this requirement are that all elementary pupils who live more than one mile and all junior high school pupils who live more than one and a half miles from the school be transported at public expense.
  5. School buildings.
    - a. The school building should be planned from a functional point of view.
    - b. The building should be arranged and constructed so as to be free from fire and accident hazards. It should be properly lighted, heated and ventilated, and so oriented as to make this possible.

- c. The building should be equipped in such a manner as to make possible the maximum of health, safety, and instructional efficiency of both pupils and teachers.
- d. The school site should be accessible, well drained, free from hazards to health and safety, free from disturbing noises, and should have ample playground facilities. There should be a minimum of one acre for each fifty pupils, and a minimum of five acres for any school having 250 or more pupils.
- e. If by alterations or additions present school buildings can be made to meet the standards set up, then remodeling should be considered. Otherwise, new buildings located on suitable sites should be recommended.

PROCEDURES: With these standards and principles as guides procedures can be determined and followed to reorganize the schools of any given area. In most of the states the smallest area that should be studied is the county. It is deemed advisable to consider an area at least as large as a county since if an area as small as a single community is studied to the exclusion of other communities, the result is likely to be poor allocation for attendance and the inclusion of territory in one district that logically should belong in another. In general, attendance districts cannot be confined even to county lines. Therefore, it becomes necessary to study the territory in adjoining counties.

Procedure in reorganizing attendance or school units involves three major steps which are as follows:

1. Collecting the essential data concerning the present organization and the status of schools and districts;
2. Working out a plan for the location and organization of schools and the division of the territory into attendance or school units;
3. Putting the proposed plan into operation.

Each of these steps will be described and discussed somewhat in detail.

*Data Concerning Present Status of Schools and School Districts:*

In general, there are two classes of data that can be used concerning the status of schools and districts: First, data concerning the information necessary to the development of plans for the consolidation and location of schools, and, second, data that can be used to show the shortcomings of the present system. The second type of data are incidental and are to be used chiefly for publicity in getting the proposed plan of reorganization adopted. The data essential to the plans for the reorganization of a school system are as follows:

*Maps*

One map should be prepared to show:

- A. Boundaries of the school districts.
- B. Location of schools, using some system of indicating the size and type of schools, as for example—

	<i>White Schools</i>	<i>Negro Schools</i>
Senior high schools	▷	▷ N
Junior high schools	△	△ N
Elementary schools	□	□ N

In these examples the numbers inside the figures indicate the number of teachers in the school.

- C. The location of roads. On this map one color or kind of line should be used to indicate paved roads; another to indicate unpaved, all-weather roads; and another to show graded roads that are unpassable during a part of the year. It is also desirable to indicate highways or roads that are planned for construction in the immediate future.
- D. Location of principal streams, especially those that divide communities but are crossed by

highway bridges; railroads and railroad crossings.

E. Mountains and other natural boundaries.

F. Corporate boundaries of municipalities.

G. Locations of community enterprises other than schools, such as churches, lodge halls, country stores, etc.

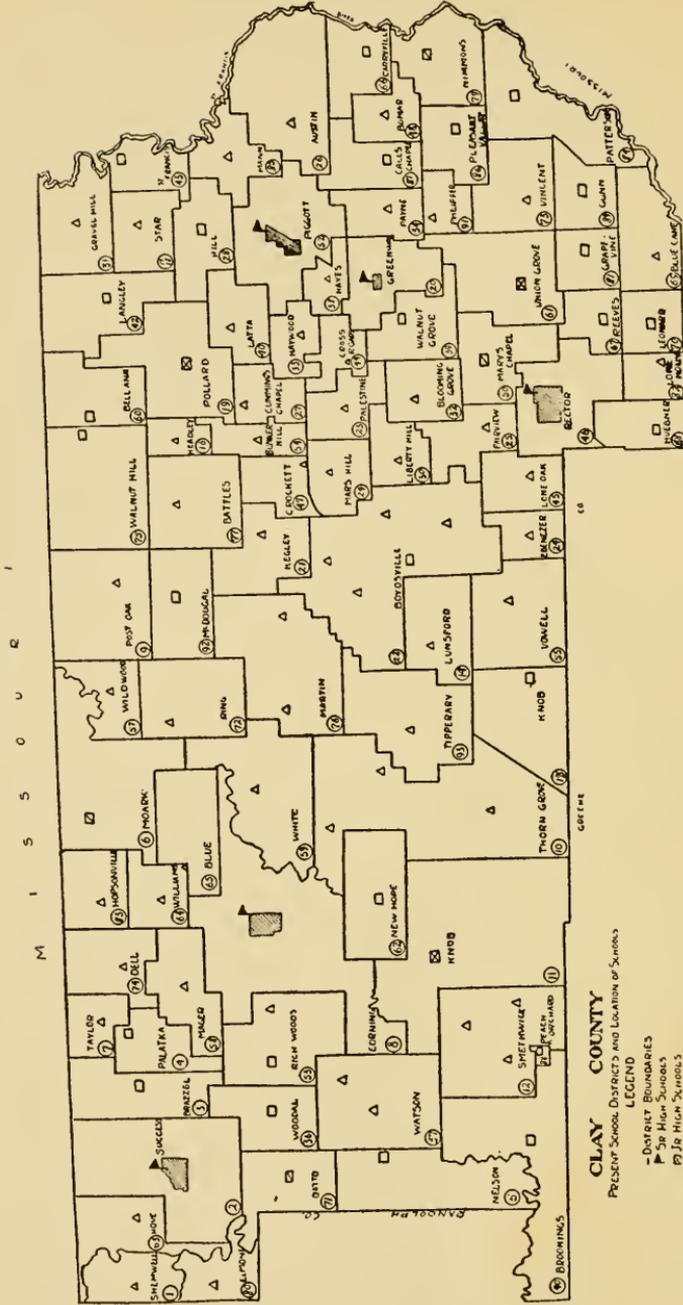
Maps I and II on the following pages are examples of such maps. Map I is a district map of Clay County, Arkansas. (3: 10.) This map shows only the district boundary lines and locations of schools. Such a map was originally made on a highway map which showed the location of roads and streams, and was used by a survey staff in making the plans for the reorganization of schools in that county. Map II was prepared for a school survey of Mercer County, West Virginia. (2: 14.) This map shows all the information listed above except the location of churches and other community enterprises. The survey staff had the use of a map that showed the location of these enterprises, but in preparing the map for the printed surveys, these locations were omitted.

Another map showing the distribution of the school population should be prepared. It is preferable that this map should also show the location of the school buildings, and the district boundary lines. Some form of symbol should be used to indicate the number of pupils of each age-group. These groups should be approximately the proper ages for elementary school, junior and senior high school. Ordinarily these will be the groups 6 to 11, 12 to 14, and 15 to 17. The symbols might be as follows:

6 to 11 .  
12 to 14 —  
15 to 17 +

As a rule the maps prepared by the state highway department will be found usable as a basis for these maps. It is desirable but not necessary that an expert, such as a county or city engineer, be employed to do this work. The best method for making a school population map is as follows:

MAP I



**CLAY COUNTY**  
 PRESENT SCHOOL DISTRICTS AND LOCATION OF SCHOOLS  
 LEGEND  
 - DISTRICT BOUNDARIES  
 \* JR. HIGH SCHOOLS  
 \* JR. HIGH SCHOOLS  
 \* 3 OR MORE TEACHER SCHOOLS  
 \* 2 TEACHER SCHOOLS  
 \* 1 TEACHER SCHOOL





1. Prepare for each attendance district an alphabetical list of the names of the pupils for each age-group.

2. Prepare a map of the attendance districts, or at least of each school district. With the assistance of the teacher or some person who is well acquainted with the families and the topography of the district, place a dot on the map in the approximate location of the home of each pupil. In states that are laid off into mathematical townships it is sufficient to place a dot in the quarter section of land in which the pupils live. In the older states where land is measured by metes and bounds, it is somewhat more difficult to prepare such a map but with the help of some older citizen and the aid of a map showing the locations of roads and streams and school buildings, it is usually possible to locate approximately a dot for each pupil.

3. After the maps by districts have been made, transpose the dots to a map for the entire area being studied. In most cases this will be the county. Land ownership maps are frequently of considerable assistance in making school population maps. Such maps can usually be obtained from an abstractor living in the county.

*Schools:* For each school data will be needed showing the number of pupils in each grade, the number of teachers, and the census by age-groups. The school census should be available for each attendance district, or at least for the area of attendance for each school. Form I furnishes a convenient scheme for tabulating these data.

It is possible to divide each of the grade columns into columns for boys and girls separately, and sometimes that is desirable. The columns for enumeration can also be divided so as to show separate data for boys and girls. Under the column headed "Districts and Schools" the schools in each of the districts should be presented in order. For example, begin with District No. 1, listing all the schools in that district before proceeding to the next district. In states that maintain separate schools for Negroes, separate forms should be used for the two classes of schools.

*Transportation of pupils:* Accurate information as to the number of buses, the bus routes, the number of children trans-

ported over each route, the distance traveled by each bus and the cost of operation should be tabulated. An accurate description of the route traveled by each bus should be recorded on a convenient form. Form II is a convenient one for tabulating this information. Under the column headed "Bus Routes" one line should be used for each bus operated, and the buses should be designated either by name or number.

*Population:* Basic data concerning population trends should be collected from the U. S. Census Reports. Total population and population by age-groups can be obtained and should be analyzed for a period of at least three decades. Population statistics for minor political subdivisions are reported in the U. S. Census Reports and can be used to advantage in studying the various parts of the territory under consideration. Data concerning school population should be tabulated by five-year periods for at least two decades, but it is preferable that annual tabulations for the last decade be made.

*School buildings:* A floor plan of each building having more than three teachers in the area being studied should be drawn. These plans should indicate the size of each room and the number of pupils accommodated. Notations as to the type of structure, general condition as to repairs, age, lighting, heating and ventilation, equipment, location, orientation, and possibility of additions should be made. Many surveys have used the score-card method of evaluating buildings. The score card most frequently used is the Strayer and Engelhardt Score Card for School Buildings.<sup>3</sup> One set of these cards is used for city schools and another set for rural schools.

*Other information:* Other data concerning schools and school districts can be collected wherever it is considered desirable. Data showing the differences in length of school term, in tax rates, in revenue and expenditures per pupil attending school, and per teacher employed, the difference in the value of the school property per child and per teacher are especially valuable in indicating the differences in educational opportunity. Other data pertaining to the training, experience, salaries, and tenure of teachers are also helpful. Many surveys present age-

<sup>3</sup>Bureau of Publications, Teachers College, Columbia University, New York.

grade tables and grade-progress tables for different types of schools. An analysis of time distribution in the schools based upon an analysis of daily schedules of recitation is valuable for showing the superiority of larger schools. A comparison of the units of work offered in different high schools and a list of the subjects available will indicate the variations in the educational opportunities in high schools of different sizes.

*Working Out a Plan for Reorganization:*

The first procedure in the reorganization of schools in any selected area is to set up a tentative plan for the consolidation and location of schools. With the aid of the maps described in previous sections and the data concerning the number of pupils in the various schools, the most desirable senior high school centers can be selected. The elementary schools in the area surrounding these proposed high school centers should be studied to determine which should be abolished and the pupils transported to central schools. It should be decided tentatively which schools should be retained and probably enlarged by consolidation with other schools. The procedure for setting up such a tentative plan is as follows:

The person or persons directing the study should form a council composed of the county superintendent of schools, the district superintendents, the principals of schools, and one or more recognized lay leaders from each of the communities affected. Such leaders will usually be members of local school boards. As a rule there is not much difficulty in getting such a council to agree upon the locations of the large central high schools. The problem of closing small high schools usually involves considerable discussion. The director of the study should explain carefully the standards as to the size of schools and type of organization. The problem of every school in the area surrounding the central high school should be discussed carefully with special reference to the feasibility of transporting the children and the effect upon the community life of the area where the school is located.

The result of this procedure should be a tentative plan which will include a central high school having at least grades ten, eleven, and twelve, or most frequently in rural areas a six-year

high school. In connection with such schools there will usually be an elementary school. In the area served by this school certain schools will be abolished and all pupils transported to the central school. There will be centers where an elementary school should be established and other elementary schools in the area abolished, with the elementary pupils being transported to the central elementary school and the high school pupils to the central high school. In some cases there will be subsidiary schools that will maintain nine grades of work to which pupils in these grades will be transported and pupils in the senior high school grades transported to the central high school. A convenient scheme for arranging these schools and tabulating data is as follows:

I. Central high school with an elementary and junior high school in connection.

List schools to be abolished.

1. Elementary school

List schools to be abolished.

2. Elementary school

List schools to be abolished.

A. Junior high school with elementary school in connection.

List schools to be abolished.

1. Elementary school

List schools to be abolished.

2. Elementary school

List schools to be abolished.

Isolated schools

List here the schools from which it is not feasible to transport children to central schools.

In this scheme the Roman numerals indicate the central high school, which usually will have all the grades from one to twelve in the same location. Immediately following the name of the central high school will be listed the schools that should be abolished and all pupils transported into the central school. The elementary schools that are to be retained or established

are preceded by Arabic numbers 1, 2, 3, etc., and under each of these elementary schools will be listed the schools that are to be abolished. In some areas there will be a contributory junior high school in connection with which there will be elementary schools. The names of the junior high schools will be preceded by capital letters A, B, C, etc. Following the name of the junior high school will be listed all the schools that are to be abolished, all pupils in the first nine grades being transported to the junior high school and all above the ninth grade to the central high school. Any elementary schools to be maintained whose pupils in grades seven to nine are to be transported to the junior high school will be listed immediately below the list of schools to be abolished, and their names will be preceded by Arabic numerals. Any schools that are to be abolished and the pupils of the first six grades transported to those elementary schools, the junior high school pupils to the junior high school and the senior high school pupils to the central high school, will be listed immediately following the names of the schools the children affected are to attend. In some areas there will be schools from which children cannot be transported. This condition may be temporary or permanent. These schools should be listed in connection with the central high school which the pupils from them will be most likely to attend. Form I should be used in arranging a list of schools according to the above description. The grade distribution, the school census, and the number of teachers should be tabulated for each school on this form.

With this tentative plan for the consolidation and location of schools as a working basis, all of the necessary transportation routes should be worked out. Data concerning the total number of pupils to be transported on each bus, the maximum number at any one time, the average number, and the number of miles to be traveled by each bus should be recorded. Form II can be used for this tabulation of data.

Data then should be collected as to the new school buildings that will be needed and the additions and alterations on old buildings necessary to accommodate the new program. Examination of the buildings that are to be abandoned should be made to determine whether it will be more feasible to change the plan

and retain some of these buildings than it would be to erect new buildings on new locations, or to make additions to other buildings at locations where it is proposed to have a consolidated school.

After the data indicated above have been assembled it will usually be found necessary to modify the original tentative plan. Some schools will be changed from one center to another. It may be found desirable to establish additional schools or to abandon some that were included in the original plan. All such decisions should be made in the light of the data assembled and with the counsel and advice of the school executives and leading citizens of the communities affected.

In the permanent plan for the reorganization of schools the procedure described previously will be used in locating the schools that are to be established and those that are to be abolished. The data should be arranged on Form I and thereafter the data tabulated on all other forms should list the schools in the same order and according to the same schematic plan.

#### *Putting the Proposed Plan Into Operation:*

A suggested procedure is to organize a working council composed of the county superintendent, the district superintendents, principals, and leading laymen, thereby forming a working group through which the plans of the reorganized school system can be presented to the people. It is desirable to prepare a brief written report setting forth the tangible characteristics of a satisfactory school, a comparison of the present school system with the suggested standards, and the plan for the location and organization of the schools in the reorganized system. This report should be made widely available to the citizens in the territory affected. Maps and graphs should be used freely and clear statements of the effects of the proposed system and the results to be expected from its operation should be set forth.

*Legal provisions:* If the proposed plan of adequate attendance or school units is to be put into operation it is essential that state laws that facilitate the creation of such units be enacted. The need of this provision is emphasized by the long and laborious process required to change laws pertaining to



FORM II—TRANSPORTATION NEEDS

BUS ROUTES	TOTAL NO. OF PUPILS	AVERAGE NUMBER PUPILS	LENGTH OF BUS ROUTE ONE WAY	MILES OF ROAD ONE WAY		BUSES OWNED BY DISTRICT		TOTAL COST	BUSES CONTRACTED FROM INDIVIDUALS <i>Price Per Month</i>
				Dirt	Hard Surfaced	Salary of Driver	Cost of Operation		

DISTRICT..... COUNTY.....

FORM III—FINANCIAL DATA FOR COUNTY SCHOOL SURVEY

DISTRICTS	ASSESS- ED VAL- UATION	MILLS VOTED		INDEBTEDNESS		STATE APP'T	REVENUE				NON- REVENUE RECP'TS	GRAND TOTAL	
		19 --	19 --	Current	Bonds		Misc. County Sources	Local Tax	Other Revenue Sources	Total Revenue Receipts			

DISTRICT..... COUNTY.....





schools in many states and the great advantage given to entrenched minorities in preserving the accustomed order of things.

Examples of the laws that facilitate the reorganization of school units are to be found in Maryland, Louisiana, and North Carolina. In Maryland the county board of education has complete authority to consolidate schools and to locate such schools as in their judgment are necessary to provide for the education of the children of the county. (8: Chap. 4, Sec. 50.) In Louisiana the parish board of education has much the same kind of authority as the county board in Maryland. (7: 161, Sec. 21 of Act 100, 1922.) In North Carolina the power of the county board of education to consolidate and locate schools is very much the same as that in Maryland and Louisiana, the chief distinction being that the county board of education is required by law to draw up a county-wide plan for the location of schools and the creation of local attendance districts, and after such plan has been drawn up consolidations not in conformity with the plan cannot be made. There is not a clear distinction between attendance units and administrative units. (11: 22-23, Sec. 73-A, Article 6.)

#### THE REORGANIZATION OF ADMINISTRATIVE UNITS

The specific standards for guidance in the formation or creation of administrative units have been developed in Chapters III and IV. They are briefly summarized as follows:

1. The primary function of the school district is to provide adequate educational facilities and opportunities for at least twelve years to each child that lives within its borders. When a district does not have sufficient population to furnish such facilities and opportunities it should be consolidated with other territory or districts in order to establish a sufficiently large district. Boundary lines should remain flexible so that adjustments can be made to provide for the best educational advantages of the children affected.
2. A school district should be sufficiently large to provide the administrative and supervisory services

necessary to an adequate performance of the educational function of the schools. It is a function of the school district to furnish capable professional leadership. This function cannot be performed at a reasonable cost in districts that are smaller than the minimum sizes stated hereafter. The district should furnish the professional personnel to perform the services of:

- a. Business administration.
- b. Supervision of instruction.
- c. Health education.
- d. Census and attendance.

3. The smallest district that can adequately furnish the professional personnel for the performance of these services is one that has at least 1,600 enrolled pupils and forty-five teachers. A more desirable size is a district that has approximately 10,000 pupils and 275 to 300 teachers. No data are available to indicate the maximum or optimum size of a school district. Under present conditions, however, the major problem in the majority of the country is to get school districts that meet at least the minimum requirements as to size.

4. Wherever territory is so situated that because of lack of pupils it cannot properly maintain a complete school system, and at the same time cannot properly be made a part of a district maintaining a complete school system, such territory must of necessity be organized into a district and provided with the best schools possible under the circumstances.

5. The administrative unit should be divided into attendance districts, one for each school, each of which should include all the area from which children attend the school located within its boundaries.

**PROCEDURES:** With the foregoing principles and standards as guides, the reorganization, creation and formation of adequate administrative units for school purposes may be under-

taken in either or both of two ways: (1) by legislative action; and (2) by delegated authority. These methods of procedure are discussed in the order named, but prior to such discussion it will clarify matters to present the fundamental legal basis for the creation, formation and alteration of school units.

The state has certain definite powers over local school units. The state legislature has, within the limits set by the state constitution or by the Constitution of the United States, absolute control of the public schools, both as to administration and financial support. The legislature, however, instead of directly administering the school system of the state provides agencies to perform this function and delegates to those agencies authority which the legislature itself possesses. Concerning this power to exercise authority or to delegate the power to exercise it, the courts are unanimous in their opinions that the power of the legislature within constitutional limits is plenary.<sup>4</sup>

The legislature may designate and require subdivisions of the state, created primarily for other purposes, to establish and maintain schools. Such subdivisions as counties, townships, towns, and cities may be designated as corporate school districts, and such districts may be dependent upon the political subdivisions for their existence, or they may be entirely independent of the subdivisions and merely geographically coterminous. The legislature may create school districts that are entirely independent of all other governmental subdivisions and not coterminous with any other political unit.<sup>5</sup>

The legislature may form school districts by its own acts or it may delegate the authority to create, form, or alter school districts. Such delegation of power is not construed by the

<sup>4</sup>The following citations are from Edwards (5: 673): Attorney General vs. Lowrey, 199 U. S., 233, 26 S. Ct., 27, 50 L. Ed., 167; City of Louisville vs. Commonwealth, 134 Kentucky, 488, 1212 S. W., 411; Pearson vs. State, 56 Arkansas, 148, 19 S. W., 499; State vs. Hine, 59 Conn., 50, 21, Atl., 1024, 10 L. R. A., 83; Kuhn vs Board of Education, 175 Mich., 438, 141 N. W., 574, 45 L. E. A. (N. S.), 972.

<sup>5</sup>The following citations are from Edwards (5: 674): Associated Schools of Independent District No. 63 vs. School District No. 83, 122 Minn., 254, 142 N. W., 325, 47 L. R. A. (N. S.), 200; State vs. Haworth, 122 Ind., 462, 23 N. E., 946, 7 L. R. A., 240; State vs. Freeman, 61 Kan., 90, 58 Pac., 959, 47 L. R. A., 67; State vs. Hine, 59 Conn., 50, 21, Atl., 1024, 10 L. R. A., 83; State vs. Delaware Iron Co., 160 Minn., 382, 200 N. W., 475.

courts to be a delegation of legislative power, but of the power to create administrative bodies and vest them with discretion in local affairs.<sup>6</sup>

The legislature may create or alter school districts without the consent of the inhabitants in the territory affected, or it may delegate such authority to whatever administrative body it may choose. Likewise the legislature may require school districts and their officials to perform even against their consent such duties as the state may impose upon them.<sup>7</sup>

The question of vested interest of school districts that have long been organized sometimes arises in the abolition and consolidation of districts. The following quotation from Edwards is a complete answer to such a question: (5: 689.)

Whatever agencies the legislature may select as the instruments for the execution of its educational policies, these agencies are completely subject to its control within constitutional limits.<sup>8</sup> Since school districts are purely creatures of the state, they possess no inherent local rights—no rights at all, in fact, except such as are delegated. Their powers and the mode of exercise of these powers are defined by legislative act and may be added to, diminished, or destroyed as the legislature may determine.<sup>9</sup> In the words of the Supreme Court of North Carolina, “such or-

<sup>6</sup>Following citations are from Edwards (5: 675): Trustees of Slaughter-ville Graded School District vs. Brooks, 163 Kentucky, 200, 173, S. W., 405; Bobbitt vs. Blake, 25 Idaho, 53, 136 Pac., 211; Landis vs. Ashworth, 57, N. J. L., 509, 31 Atl., 1017; Drouin vs. Board of Directors, 136 La., 393, 67 So., 191; Norton vs. Lakeside Sp. Sch. Dist., 97 Ark., 71, 133 S. W., 184; Mitchell vs. Directors of School Dist. No. 15, 237 S. W., 371; Bay State Live Stock Co. vs. Bing, 51 Neg., 570, 71 N. W., 311; Reynolds Land and Cattle Company vs. McCabe, 72 Tex., 57, 12 S. W., 165; School Dist. No. 17 vs. Zediker, 4 Oklahoma, 599, 47 Pac., 482.

<sup>7</sup>Fisher vs. Fay, 288 Ill., 11, 122 N. E., 811; State vs. Norwood, 24 Tex. Civ. App., 24, 57 S. W., 875; School District No. 17 vs. Zediker, 4 Okla., 599, 47 Pac., 482; Buckman vs. State, 81 Ohio St., 171, 90 N. E., 158. (5: 674.)

<sup>8</sup>Floydada Independent School District vs. Shipley, 238 S. W., 1026; State vs. Freeman, 61 Kan., 90, 58 Pac., 959, 47 L. R. A., 67; State vs. Hine, 59 Conn., 50 w1 Atl., 1024, 10 L. R. A., 83; MacCormack vs. Robeson County, 90 N. C., 441; State vs. Haworth, 122 Ind., 462, 23 N. E., 946, 7 L. R. A., 240; Stephens vs. Jones, 74 S. D., 97, 123, N. W., 705. (5: 689.)

<sup>9</sup>Bopp vs. Clark, 165 Ia., 697, 147 N. W., 172, Ann. Cas., 1916 E., 417, 52, L. R. A. (N. S.), 493; Honaker vs. Board of Education, 42 W. Va., 170, 24 S. E., 544. (5: 689.)

ganizations are intended to be instrumentalities and agencies employed to aid in the administration of the government, and are always under the control of the power that created them, unless the same shall be restricted by some constitutional limitation. Hence, the legislature may, from time to time, in its discretion, abolish them, or enlarge or diminish their boundaries, or increase, modify, or abrogate their powers. It may provide that the agents and officers in them shall be elected by the electors, or it may appoint them directly, or empower some agency to appoint them, unless in cases where the constitution provides otherwise, and charge them with duties specific and mandatory, or general discretionary in their character."<sup>10</sup> Moreover, the state is not limited in its choice of policies. The legislature, having tried one plan is not precluded from trying another. It has a choice of methods, and may change its plans as often as it deems necessary or expedient.<sup>11</sup> In other words, long exercise of powers on the part of local units does not give rise to vested interests, for the state does not relinquish control of the school system by delegating some of its authority to the different localities.<sup>12</sup>

When attempts are made to abolish school districts, to consolidate them, or to alter their boundaries, suits are sometimes instituted on the ground that the Federal Constitution prohibits the state or its agencies from impairing the obligations of contracts and from depriving any person of property without due process of law. "Duties of a school district are obligations imposed, not a contract," is the language of the courts.<sup>13</sup> The Supreme Court of the United States has answered such contentions in the following language: "School districts cannot have the least pretension to sustain their privileges or their existence upon anything like a contract between them and the legislature of the state, because there is not and cannot be any reciprocity of stipulation, and their objects and duties are

<sup>10</sup>MacCormack vs. Robeson County, 90 N. C., 441. (5: 689.)

<sup>11</sup>State vs. Haworth, 122 Ind., 462, 23 N. E., 946, 7 L. R. A., 240. (5: 689.)

<sup>12</sup>*Ibid.*

<sup>13</sup>In re School Committee, 26 R. I., 164, 58 Atl., 628. (5: 687.)

utterly incompatible with everything of the nature of a compact."<sup>14</sup>

*Creation of administrative units by legislative action:* Under this plan of procedure the legislature sets up some designated governmental unit such as the county, the township, or the city, as the administrative unit for school purposes. Provision is made for the control and support of schools in the designated unit. Control is usually placed in the hands of a board which is given authority to locate, abolish, and consolidate schools in such way as is believed to serve the best educational interests of the children affected.

Many leading authorities in the field of political science and school administration advocate the designation of the county as the unit of local school administration either including or excluding cities. Wherever cities are excluded it is usually agreed that only cities of 10,000 or more population should be independent of the county school district. Evidence has been presented in Chapter IV to show that only cities of 7,500 population or more are sufficiently large to become efficient and economical independent administrative units for school purposes.

The facility with which local administrative school units can be formed or changed in any state will be determined to no small degree by the kind of laws regulating such matters. For this reason some of the essential points to be included in drafting laws and to be observed in the procedure of reorganizing local administrative school units are presented.

NOTICE: The requirements giving notice of hearings and elections should be specific as to the time limits within which notice shall be given and as to the form of publication. The most frequent basis for attacking the legality of consolidations is the form or time of giving notice. There is considerable difference of opinion as to how strictly the statutes must be followed in the matter of detail in giving notice. Some courts have held that a strict compliance with the statutory require-

<sup>14</sup>Attorney General vs. Lowrey, 199 U. S., 233, 26 S. Ct., 27, 50 L. Ed., 167. (5: 687.)

ments is necessary.<sup>15</sup> Other courts have adopted the rule that a defect in giving the notice shall be immaterial where the results could not have been changed if the notice required had been given.<sup>16</sup> As a rule the courts will not hold an election void as a result of a mere irregularity in giving notice where the purpose of giving notice has been actually accomplished. In view of these differences of opinion, however, it is necessary that both the letter and spirit of the law be complied with by those who are responsible for the administration of the laws in the consolidation of schools or districts. It is especially important that the laws be drawn in specific language.

**PETITIONS:** Where a petition signed by a designated percentage of the qualified electors calls for an election or requests action on the part of the administrative officers with respect to the creation of districts or changing boundary lines, the filing of such petition is jurisdictional, and any election held or any action taken without such a petition having been filed is void.<sup>17</sup>

Since the courts seem to be divided on the question of whether or not the names of petitioners may be attached to the petition by an authorized agent, the law should be specific as to whether such authorized signature is acceptable. A frequent point of dispute is whether or not the signer of a petition has the right to withdraw his name therefrom. The weight of court authority supports the rule that anyone who signed the petition may withdraw his name at any time before action is taken by those to whom the petition is addressed.<sup>18</sup> It will save dispute

<sup>15</sup>Gentle vs. Board of School Inspectors, 73 Mich., 40, 40 N. W., 928; Bowen vs. Greensboro, 79 Ga., 709, 4 S. E., 159; Lewis vs. Young, 116 Ark., 291, 171 S. W., 1197.

<sup>16</sup>State vs. Hall, 73 Ore., 231, 144 Pac., 475; Sharp vs. George, 5 Ariz., 65, 46 Pac., 212; People vs. Union High School District, 101, Cal., 655, 36 Pac., 119; Plott vs. Board of Commissioners of Haywood Co., 187 N. C., 125, 121 S. E., 190.

<sup>17</sup>School District No. 2 vs. Pace, 113 Mo. App., 134, 87 S. W., 580; In re School Districts Nos. 2, 3, and 4, 122 Minn., 383, 142, N. W., 723; 20 C. J., 95.

<sup>18</sup>Montgomery Township Board of Education vs. Ashland County Board of Education, 8 Ohio App., 120; Valley Center School District No. 20 vs. Hansberger, 28 Ariz., 493, 237 Pac., 957; People vs. Strawn, 265 Ill., 292, 106 N. E., 840; School District No. 11 vs. School District No. 20, 63 Ark., 543, 39 S. W., 850; Territory vs. City Council of Roswell, 16 N. M., 340, 117 Pac., 846, 35 L. R. A. (N. S.), 1113; School District No. 24 vs. Renick, 83 Okla., 158, 201 Pac., 241; In re Mercerburg Independent School District, 237 Pa., 368, 85 Atl., 467. Note: 11 L. R. A. (N. S.), 372; 15 Ann. Cas., 1125.

if the law is specific in a statement that the right to withdraw names ceases when the petition has been filed with the body that is to act upon it.

**ELECTIONS:** The law pertaining to calling and holding elections should be specific as to the manner of calling the elections and giving notices, the time and manner of holding the election, canvassing the returns and certifying the results. The law should also be specific as to the method of determining the results of the election. It is common practice for the law to state that if the question being voted upon receives a majority of the votes of those voting at the election the question carries. Such a statement, however, should be made specific.

**DISPOSAL OF PROPERTY AND OBLIGATIONS:** In the consolidation of school districts specific provision should be made for the disposal of the property and indebtedness of the districts affected. The law should specifically declare that all property in the districts dissolved shall become the property of the new district, and that all debts and obligations of the old districts shall become the debts and obligations of the new district. Sometimes the law states that the bonded indebtedness of old districts shall remain the obligation of the territory originally affected. An example of such procedure is the recent county unit law enacted by the legislature of West Virginia. The courts have held that such a statute cannot be construed as impairing the contract. It sometimes happens that when a district is dissolved contention is made that all the debts of the district fall due and must be liquidated. For this reason the statutes must state specifically and emphatically that the abolition of districts does not cause the debts to fall due immediately. The contract does not become impaired whether or not the law provides that the new district shall take over the indebtedness of the old districts. Where districts are divided some provision should be set up in the law for dividing the property of the district as well as for a division of the debts. A general rule is to divide the indebtedness in the same ratio as the assessed valuation of taxable property. If the school property is sold an equitable rule is to divide the proceeds of the sale in the

same ratio as the assessed valuation of taxable property is divided.

**PROVISION OF A BOARD FOR THE NEW DISTRICT:** Consolidation laws should make specific provision for the creation of a school board for the newly formed district. In some cases it is provided that all board members in the territory affected hold office until the next school election. Such a plan results in a cumbersome board and frequently makes it practically impossible for the board to take any action until the school election is held and a small workable board is elected. The law should provide either for the appointment of a board to serve until the next regular school election or for the calling of a special election to elect a board of workable size.

**COMPULSORY LOCATION OF SCHOOLS:** While it is usually safe to leave the location of schools and the provision of transportation to the discretion of the school board, it is frequently helpful in dealing with the public for the law to state that wherever there are ten or more children (or some other stipulated number) who live more than two miles from the school, the board shall either establish a school for their benefit or furnish transportation at public expense to the nearest school. Such a statement in the law gives a definite answer to the objection of those who believe that the board of a large district would not make school advantages accessible to the children affected.

**RIGHT OF APPEAL:** Wherever authority is delegated to form, create, alter, or consolidate school districts the right of interested parties to appeal from the order or decision of the official or board is almost without exception stated in the statutes. It is highly desirable, however, that the statute be specific in designating the nature of the appeal. In general, matters of discretion placed in the hands of a board should not be subject to review by the courts. For example, the educational desirability and the administrative feasibility of a change in district organization should not be a subject of appeal. Matters of law should be and are of necessity subjects of appeal and of review by the courts.

An example of the operation of the county school administrative system is to be found in Maryland where each of twenty-

three counties constitutes an administrative unit for schools.<sup>19</sup> In Louisiana each of the sixty-four parishes constitutes a separate administrative school unit.<sup>20</sup>

There are some advantages, especially in states where the county is the chief local political unit, in using the county as the administrative unit for school purposes. In the first place, the people are accustomed to consider the county as the unit of local government. In the next place, it is the agency through which taxes are collected and frequently through which they are levied. It is the only existing political unit that is large enough, in a majority of cases, to afford adequate administrative and supervisory services at a reasonable cost. If any unit less than the county is adopted there will necessarily be a continuous struggle to maintain the local unit large enough to perform the functions required of it.

*Creation of administrative units by delegated authority:* The legislature can and usually has delegated the authority to create, form, and alter the local administrative school units. The legislature can delegate such authority to a state board of education, the state superintendent of schools, the county board of education or some other county official, or to any authority or official it may choose. The extent to which legislatures have delegated to the state board of education or the state superintendent authority to form local school units is limited. In some instances they have given such officials discretionary power to approve or disapprove proposed plans for the formation of school districts, such plans having originated locally. The usual procedure is for the legislature to empower the county board of education to act on all matters pertaining to the creation, formation, alteration, and consolidation of school administrative units.

Where authority is delegated to the county board of education or some other local official or body any one of several degrees of authority may be delegated and any one or more of several methods of procedure may be designated. The power to determine local administrative units may be left arbitrarily

<sup>19</sup>The City of Baltimore constitutes a separate administrative unit.

<sup>20</sup>The Cities of Monroe and Lake Charles constitute separate units.

to the designated local authority, as for example in North Carolina. In this state the county board of education has arbitrary power to consolidate school districts and schools but is required to consult with local trustees in formulating plans. The action of the trustees, however, is only advisory and not binding. It is generally conceded by people who have seen this system in operation that the county boards are responsible to public opinion, and only in rare instances have formed consolidated schools or districts without consulting the people affected, or without taking ample time to cultivate public opinion in favor of any proposed plans of consolidation.

The county board of education, or some other central board may be authorized to create, form, alter, or consolidate local school units, when authorized to do so by petition or an election from the people affected. In some cases, as in Missouri, a majority of the qualified electors voting on the question in each district must favor the proposed consolidation before it can be made. In other cases, as in Arkansas, a majority in the territory affected is required. Where districts are formed by authority of a petition it is usually required that a majority of the qualified electors in the territory or district affected shall sign the petition. It is possible, however, to name some designated percentage of the electors that must sign the petition before it can be acted upon. Usually in case of an election or a petition the county board may be given discretionary power in the matter of consolidating schools or school districts. The county board of education may be required to make the consolidations in accordance with the petition or election, or it may be given power to exercise its judgment.

The order of preference of these plans for consolidating schools and districts seems to be as follows:

1. Arbitrary power is delegated to the county board or some other central board.

2. Discretionary power is given the county board of education to make consolidations when authorized to do so by a petition or election. This authorization is determined by a majority of the qualified electors in the territory affected. In the case of an election the majority should be determined on the basis of those voting in the election.

3. The county board of education is required to make consolidations when a proposed plan has been approved by a majority of the qualified electors in the territory affected.

4. The county board of education is required to make consolidations when the proposed plan has been approved by a majority in each district affected.

These plans of forming and changing local administrative school units usually result, wherever any changes are made, in the creation of community or central or consolidated districts. Such districts are usually much smaller than the county, are independent of any other political unit, and have a sufficient number of children to justify a school program with at least twelve years of instruction. The chief shortcoming of the central district is that too frequently it is not large enough to furnish the necessary administrative and supervisory services except at prohibitive cost. Another objection is that unless plans for the creation of such districts are made on a state-wide basis, or at least on a county-wide basis, these districts tend to be formed in such a way as to reduce the educational opportunities of the children who do not live within their borders. There is a tendency to gerrymander so as to include territory that has considerable wealth that should be included in another district. The result is likely to be a system that has good school advantages only in spots. If the policy of establishing central school districts is adopted in any state, such districts should consist of several attendance districts. If such procedure is not followed it becomes necessary to adopt the policy of superimposing administrative and supervisory services through some such plan as county or district superintendency. This results in division of responsibility and authority and tends to perpetuate inefficient and expensive schools.

In order to illustrate some of the best procedure in forming and consolidating administrative school units, examples have been chosen from New York, Missouri, and Arkansas. In presenting these examples some evaluation of the procedures will be presented.

In New York the law provides for the creation of central school districts formed by the consolidation of contiguous school districts. The state commissioner outlines the procedure by

which such districts may be formed. The regulations of the State Commission require that the proposed district shall consist of a group of existing districts around a natural or logical center, and that it shall include all the territory that reasonably may be included therein. A central district is required to include such resources, population, and taxable property as will insure well-organized, graded instruction in both elementary and high school subjects. The procedure in forming central districts is described as follows: (6: Chap. VI, Sec. 4)

The districts desiring to organize a central rural district secure petitions outlining the boundaries of the proposed district, its bonded debts, taxable resources, and other detailed facts. Either the electors in a majority of the districts to be included, or a majority of all electors in the proposed district must favor the reorganization. When the commissioner of education receives this petition he sends out an examiner from his office to check up on facts, meet the people, and report back to his office. If satisfied with the value of such a district he proceeds to issue an order laying out the district. A school meeting of electors residing in the proposed district is then held and a formal vote taken on the establishment of the central rural school. If favorable the meeting proceeds to elect a board of education of five members. This board has jurisdiction over all schools in the central rural district. It becomes in fact a rural consolidated district, or as it is called in New York State, a "Central rural school."

In Missouri<sup>21</sup> under the provisions of an act by the state legislature of 1931 the county superintendent of each county is required to call a meeting of the presidents and clerks or secretaries of all the various school districts in his county for the purpose of selecting a board of six members to be known as a re-districting board. The members of this board are required to be residents of the county for which they serve and not more than one member can be chosen from the same municipal town-

<sup>21</sup>*Missouri Revised School Laws*, State Superintendent of Public Schools, Jefferson City, Missouri, 1931, pp. 230-233.

ship. It is the duty of the re-districting board to formulate plans for enlarged and consolidated districts composed of contiguous territory in their county. The board has no authority to propose a district that has an aggregate assessed valuation of less than \$1,500,000 unless such district has an area of fifty square miles or more. The county superintendent of schools is given power to authorize the board to propose the establishment of districts having a smaller area, but their action shall be subject to the approval of the state superintendent of schools. The re-districting boards working through their county superintendents are also authorized to propose districts consisting of territory in two or more counties. The county superintendent is required to file with the clerk of each county affected a map showing the boundary lines of the proposed school district, and to cause to be published in at least one newspaper by one insertion in each county the list of the existing school districts of which the proposed enlarged districts are to be composed.

Upon the receipt of a petition signed by not fewer than fifty legal voters residing in the proposed enlarged district and not fewer than five from each component district affected, the county superintendent is required to call a meeting of the electors in each component district for the purpose of accepting or rejecting the proposal of an enlarged district. Both printed and posted notice must be given to the electors of each district affected. In order to form the proposed district it must be approved by a majority of the electors voting on the question at the meeting or election in each district. If any district fails to give a majority approval the proposal fails. The county superintendent is then authorized to formulate another plan, and meeting or elections are held for consideration of the new proposal. The same proposal cannot be submitted to the district twice within a period of twelve months.

The State Department of Education set up a Division of Surveys and through trained workers in this division made surveys and set up proposed plans for enlarged districts in 107 counties. These plans can be accepted or rejected by the re-districting boards. The purpose of making such plans was to lay off districts, taking into consideration the children of the whole county and its surrounding territory; and to set up

schools that conform to the minimum standards of school efficiency. At the time of this writing the re-districting boards are in the process of adopting plans and proposing enlarged districts. (10: X to XVI.)

There are three fundamental weaknesses in the Missouri plan.

1. The law forbids the re-districting boards to divide any present school district in organizing enlarged districts. This means that wherever gerrymandering has been practiced in the formation of local districts the inequalities and inconveniences produced by this system will be perpetuated. It is difficult in any county that is divided into numerous small districts to set up a convenient and economical plan that will not require the division of the territory of present districts. \*

2. The law does not permit the formation of the proposed districts without the approval of a majority of the electors in each district affected. This means that a very small minority of the people in a logical school area can defeat the purpose of an overwhelming majority. Such a plan is undemocratic because it will result in denying many children adequate school advantages and in perpetuating a school situation that is unnecessarily expensive. But small progress is made in the consolidation of school districts except where such districts can be formed by the approval of a majority of the electors voting on the question in the territory affected. A majority should not be determined on the basis of present existing district lines.

3. Many of the proposed districts will not have a sufficient number of children or financial resources to afford adequate administrative and supervisory services under the control of the board of the district. In order to have such services it will be necessary to superimpose them through the county or some larger unit.

In 1927 the Arkansas legislature enacted a law giving discretionary power to county boards of education to consolidate school districts when petitioned to do so by a majority of the qualified electors residing in the territory affected.<sup>22</sup> The county

<sup>22</sup>Howard A. Dawson, L. V. Cavins, et al. *An Administrative Survey of the Public Schools of Mercer County, West Virginia*, State Department of Education, Charleston, West Virginia, 1932, Chap. I.

board of education was composed of five members elected by popular vote in their respective counties. When the county superintendent and a group of interested citizens decided upon the territory to be included in a proposed district, petitions were drawn up describing the boundaries of the territory, and were circulated among the qualified electors. If a majority of the qualified electors in the territory affected<sup>23</sup> requested it, the county board of education gave notice of a hearing on the question, and if in their judgment the proposed district would adequately serve the educational interests of the children affected they issued an order creating the proposed district. The county board of education could deny the petition and refuse to create the proposed district if in their judgment the proposed district did not include the territory that should be included and was set up without giving due consideration to the educational welfare of children residing outside the proposed district as well as inside. When the proposed district was created by act of the county board of education all the directors of the component districts remained in office until the next annual school election at which time a new board of six directors was elected by the people.

The State Board of Education, in order to facilitate the creation of consolidated districts, set up a Division of Surveys in the State Department of Education. Through this division surveys were made of each of the seventy-five counties, and a county-wide plan for the formation of consolidated districts and the location of consolidated schools was drawn up. Although there were no legal requirements for following such plans, the county boards of education, without exception, adopted a county-wide plan of consolidation which was usually the one proposed through the State Department of Education because the plans had been worked out after consultation with the county board and the county superintendent. After the adoption of such county-wide plans the county boards of education, with few exceptions, did not permit any consolidations to be made that did not conform to these plans.

This plan of consolidating school districts, together with the

<sup>23</sup>Present district lines did not count in determining the majority.

establishment in 1929 of the state equalizing fund which guaranteed each school district sufficient funds to maintain an eight-month school term on the basis of a uniform salary schedule and a uniform schedule for other costs, greatly accelerated the consolidation of schools. Insofar as the number of children affected was concerned, about 60 per cent of the proposed plans were put into operation in a period of two years.

The chief objection to this plan is that in order to have adequate administrative and supervisory services for the schools, a county system of administration had to be superimposed over the central districts. The survey showed that the state should be divided into 307 central districts and that not more than seventy-five administrative and supervisory units were needed. In all cases, however, the plans for the consolidated schools were such that they would fit into a county unit plan of administration. This plan has the advantage of forestalling the over-consolidation and reconsolidation of districts if the larger unit of administration, such as the county, is adopted in the future.

#### OBJECTIONS TO BE OVERCOME

In projecting any proposed reorganization of local school units involving consolidation and relocation of schools certain objections will be met. Not all of the following objections will be found in any one place. Usually only two or three of them will be encountered in any one community.

**CONSOLIDATION DESTROYS COMMUNITY LIFE:** It is argued by people in the locality of some schools that the removal of the school will destroy their community life. It has already been pointed out that great care should be taken not to do too great violence to community life. Such an argument, however, is just as likely to be advanced by people whose community life has already disappeared because of the construction of highways and the drifting of the population toward larger communities.

**THE CONSOLIDATION OF DISTRICTS TAKES AWAY LOCAL CONTROL OF SCHOOLS:** It is only in a limited sense that this usually happens. Most of the people who make this objection are now sending their children to high schools over which they have no control. Because their local unit is too small to furnish ade-

quate administrative and supervisory services, such services are superimposed by some larger unit, such as the county or state. It is essential to try to convince at least the leaders of the community that a higher degree of local control is possible in the large local district than in the small one.

COMMUNITY RIVALRY AND PRIDE: Rivalry among neighboring communities is frequently an obstacle to the consolidation of schools. This rivalry is evidenced between neighboring villages and small towns, each of which is trying to maintain a high school. Frequently old communities that were formerly larger and more important are reluctant to admit that a nearby community is the logical place to locate a high school to serve the consolidated district. This is one of the most difficult of all obstacles to overcome, and probably will never be overcome successfully until the people are convinced that the educational advantages of the children are more important than the community agencies that undertake to perpetuate the small and expensive schools.

THE OPPOSITION OF TEACHERS AND PRINCIPALS WHO MAY LOSE THEIR POSITIONS: Such opposition usually comes from persons who do not possess the requisite training to meet the requirements of a standard school organization. Fortunately such opposition is not very widespread, and a large majority of the teachers and principals of schools generously support any move for the improvement of educational advantages.

THE SELFISH INTERESTS OF CERTAIN INDIVIDUALS: Wherever it can be done, it is usually best to consolidate the school districts first and consider the location of school sites afterwards. Selfish interests on the part of people who own real estate, whose value they would like to enhance by the location of a school, often provoke heated arguments.

Another example of the opposition of commercial interests is the country merchant who has a store near the school. He does not want the school moved because he fears it will injure his business. He seldom, if ever, expresses this argument, but uses every resource to present other arguments to the people of the community in an effort to persuade them to refuse to move the school.

In addition, many directors of local schools will object to

consolidation. They are proud of their position because of the influence it gives them in their respective communities. They dislike to surrender their prerogatives to a more central board. Persons who present this as an objection to school consolidations ignore the fact that schools are organized primarily for the benefit of the children and not for the benefit of the adults who control them. Careful investigation will frequently reveal that directors who oppose consolidations often have some personal financial interest at stake. This interest may accrue from services rendered to the district or from positions given to friends or relatives.

It frequently happens that non-resident property owners, in order to avoid the payment of higher taxes, exercise their influence on the local citizens to avoid the consolidation of schools. Such people, of course, are not interested primarily in the educational welfare of the children affected. They appeal to the prejudices and jealousies of the people, keeping in the background the real reason for their objections.

**OBJECTIONS TO TRANSPORTATION:** Some people who have not been accustomed to the transportation of school children object because they believe school buses are not safe. Some also argue that road conditions are not such that buses can be operated successfully. However, children are usually safer riding on school buses than when walking on the highways to the schools. If road conditions are such that transportation is not safe or economical, the roads should be improved. Transportation should not be attempted until this is done. In a large percentage of cases the objection that school buses cannot be operated over the roads is not well founded. Contrary to popular opinion, experience has shown that school buses can be operated over roads more easily and with greater safety than a small car.

**THE SCHOOL WILL BE TOO FAR AWAY:** Some people object to transportation of children to schools several miles away from home on the ground that they are afraid for the children to be so far from home. They say the children might get sick or injured and it would be difficult to bring them home. As a matter of fact, if the schools are properly organized, many

children would probably receive better care in the schools than at home.

**OBJECTIONABLE MORAL CONDITIONS IN NEIGHBORING COMMUNITIES:** People in some communities object to the consolidation of their schools with other schools in other communities because of moral conditions among their neighbors. The people in one community will object to lack of proper moral standards in other communities. Specific instances of rumored moral laxity are usually pointed out, and, strange to say, at the same time one community is making such an accusation against their neighbors, their neighbors are making the same accusation against them. Whether or not such objection is based on the truth, if the people of the community believe it, it is an effective objection which is exceedingly difficult to overcome.

**RELIGIOUS AND DENOMINATIONAL DIFFERENCES:** No more violent opponents to school consolidation can be found than pastors of some rural churches, especially in areas where religious views are very narrow, and associations with other denominations are not frequent. In areas where parochial schools are established this objection may be very powerful. In most cases it is so strong that it is advisable to plan the system in such a way that the parochial schools will not be disturbed. Undue interference with the maintenance of these private schools can scarcely be justified so long as the compulsory school laws are in effect and enforced. The maintenance of such schools, however, should not be used as an argument for excluding the territory which they serve from the local school district and the administrative unit. This is especially important if local taxation has to be depended upon for the support of schools.

**SOCIAL DISTINCTION BETWEEN RURAL AND URBAN PUPILS:** Where attempts are made to consolidate rural territory with neighboring villages or towns, parents frequently advance the objection that the rural children will not mix with the children of the town. They say that their children cannot dress as well as the children of the town and they do not want them embarrassed. Such an objection is very real in the minds of the people and should be met sympathetically. The results of many consolidations of towns and cities and rural territory indicate that the basis of this objection soon disappears. Within

one or two years after the children from the various surrounding communities have been placed in the same schools, it usually becomes difficult to distinguish between the rural and the town children. The differences are no greater than are to be found in the student body in any city school.

**FAILURE TO SEE THE ADVANTAGES OF LARGE SCHOOLS:** Failure on the part of many people to recognize the advantages of the larger schools is an important obstacle to the consolidation of schools. There are still many people who argue in behalf of the advantages of the one-room school. Only patience and careful presentation of facts can overcome this obstacle.

Most of these objections to consolidation can be overcome only by the desire on the part of the people for better school advantages for their children. It is useless to expect to consolidate schools and school districts only when the approval of all the citizens affected is obtained. Whenever a substantial majority of the people, which includes the recognized intellectual leadership of the various communities can be obtained, the consolidation should be made.

#### SUMMARY

The reorganization of local school units involves both attendance or school units and administrative units. In dealing with the attendance unit the problem is one of internal reorganization of the administrative unit, while in dealing with the administrative unit the problem is largely one of external organization involving the creation and formation of larger units.

In reorganizing attendance or school units it is necessary to follow certain accepted principles and standards such as those developed in Chapter II and summarized in this chapter. These standards pertain to the size and organization of schools, the location of schools, the transportation of pupils, and school buildings.

The procedure in making and executing a plan for the reorganization of attendance or school units involves the collection of essential data concerning pupils and teachers for each school and area involved, transportation of pupils, distribution of population and school buildings. On the basis of this data a tentative and then a permanent plan for the consolidation and

location of schools can be worked out and put into operation. In this last step it is advisable to organize a working council of leading and interested citizens who will acquaint themselves with the advantages of the plan and endeavor to influence public opinion in its support. It is also necessary to have statutes which will facilitate changing the school system.

In reorganizing administrative units, principles and standards such as those developed in Chapters III and IV, and summarized in this chapter, should be observed. The principles and standards pertain to the functions the administrative unit has to perform, the size of the unit, and the organization of the unit.

The state legislatures have, within constitutional limitations, plenary power over the creation, alteration, consolidation, or abolition of local school units. In exercising this power two general plans have been followed: (1) The legislature itself creates the school unit, usually by designating some political subdivision such as the county, the township, or the municipality as the school unit; (2) the legislature delegates the power to create, form, alter, consolidate, or abolish school units to some local official or board such as the county board of education. Under this latter plan local school units are usually reorganized through the creation of central or consolidated districts smaller than a county. In executing such plans for the reorganization of local school units, it is essential that adequate statutes be enacted and that certain points of law be made clear and be observed. These points of law pertain to notice, petitions, elections, disposal of property and obligations, provision for new boards, compulsory location of schools, and right of appeal.

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## CHAPTER VII

### THE LOCAL SCHOOL UNIT AND SCHOOL FINANCE

In the reorganization of local school units two important questions to be considered are: what will the program cost and how will it be financed? Although comprehensive answers to these questions are somewhat beyond the scope and purpose of this study, attention is directed to some of the problems arising from the interrelationships between the character of the local school unit and the financing of the educational program. Solutions for these problems will be only suggested, since full investigations necessary to their solution have in many important aspects not yet been made. The problems relate chiefly to the influence of the size and characteristics of local attendance and administrative units on the cost of the educational program, the influence of the method of apportioning state funds on the character of the local unit, the responsibility of the state for the support of the educational program, and plans of school support.

#### THE INFLUENCE OF THE LOCAL UNIT ON EDUCATIONAL COST

The possible effect of the size and characteristics of the local school unit on the cost of the educational program cannot be stated in absolute terms for all situations. For example, it is freely assumed by many persons that if school units are reorganized larger units always result in increasing the cost of the educational program. This assumption may or may not be valid when applied to any particular situation. Experience and available data show that any one of several conditions may result from enlarging local school units.

A more complete and satisfactory educational program for all children affected usually results from the enlargement and

reorganization of local school units. In general, in the poorer geographical areas of any state, especially in states that have made little or no attempt to equalize educational opportunities and the burden of financial support, the new educational program may cost more than the total cost of all the programs of the smaller units. On the other hand, in the richer geographical areas of any state the new program will probably cost less than the old. In areas of average and above average wealth in any state the new program may cost approximately the same as the former program.

The total cost of the reorganized educational program is hardly as significant as the improved quality of educational opportunity that can be provided under satisfactory local school units. Whether the cost be great or small, more or less, the chief point of consideration is whether a more desirable and satisfactory program of educational opportunity can be provided under larger reorganized attendance and administrative units than under small and obsolete units.

#### THE LOCAL SCHOOL UNIT AND THE APPORTIONMENT OF STATE FUNDS

The size and character of the local unit, both attendance and administrative, have a definite bearing upon the problem of the apportionment of state funds to school districts. As pointed out previously, in most of the states the greater part of school support is derived from taxes levied and collected in the local units. Where these local units are numerous and small and the range of economic ability to support schools is great, and where the state has undertaken to equalize to some appreciable degree the burden of financial support, the method or methods of apportioning state funds to the local units often becomes extremely complicated and cumbersome. On the other hand, if some simple method of apportionment such as a given amount per census child, per pupil in average daily attendance, or per teacher, is used where the school units are numerous and vary greatly in size, the results are likely to be inequitable. In general, the larger the local school unit, especially the administrative unit, the more equitable becomes a simple and unrefined method of apportionment. (3: 109-10.) Inasmuch as large

administrative units tend to have about the same distribution of elementary and high school pupils in schools of satisfactory size, a simple basis for apportionment, such as average daily attendance, becomes satisfactory. For example, in Utah, a large state with only forty local administrative school units, the apportionment of state school funds on the basis of the school census is reasonably fair and equitable. The same is true for Maryland and Louisiana.

Moreover, the method or plan of apportioning state school funds may tend to retard and place a penalty on the reorganization and enlargement of local school units, especially attendance or school units. For example, surveys of Laurens County, South Carolina, and Mercer County, West Virginia, showed that if schools were consolidated according to a county-wide plan these counties would suffer losses in the amount of state school funds that could be received under the laws of their respective states. (2: 39, 123, 143-5; and 1: 97, 118.) In each of these states school funds were apportioned to the local units on the basis of the number of teachers employed. Consequently the reduction in the number of teachers required under the reorganized school units would result in a loss of funds from the state to the local units. No lengthy explanation is necessary to show that such conditions place a penalty on those who undertake to improve educational conditions by the reorganization and enlargement of local school units.

Furthermore, the method of apportioning state school funds may stimulate and put a premium on the reorganization of local school units. For example, the plan recommended in a recent survey of the public schools of Missouri calls for the guarantee by the state of a minimum of \$900 per year per teaching unit and an increase of \$150 each biennium until a minimum of \$1,500 per teaching unit is reached; with the provision, however, that only those school units that are reorganized according to the state plan will be permitted to share in the biennial increments. A further example is found in New York where central districts receive all grants and quotas allowed to other districts, and in addition a quota equal to one-half the sum paid for the transportation of pupils, and a quota equal to one-fourth of the sum expended for the erection, enlargement or

remodeling of school buildings in the reorganized district. (4: Chap. VI, Section 4; 6: 295.)

The plan of apportioning state school funds may hinder the proper organization of schools within the local units. In California, for example, the plan of apportioning state funds has greatly retarded the organization of schools on the basis of the six-year elementary school, the three-year junior high school, and the three-year senior high school, or the six-year high school. The state is required by its constitution to furnish at least \$30.00 per year per child in average daily attendance in elementary school (eight grades), and \$60.00 per child in high school (grades nine to twelve). Because the cost per pupil in junior high school grades is usually greater than in the elementary grades, the local units find it difficult to make the change in internal organization of their schools. (4: Chap. VI.) On the other hand, a plan of state apportionment which would make allowance for the increased cost of the junior high school type of organization would undoubtedly accelerate a change in organization.<sup>1</sup>

The problems of the reorganization of local school units and of the apportionment of state school funds are inseparable in two respects. In the first place, if the reorganization of local school units is to be encouraged, the amount of state funds provided and the plan of apportionment must be sufficiently flexible to guarantee the maintenance of the minimum educational program adopted by the state. If that guarantee becomes an actuality the funds must be sufficient in amount and apportioned in such way as to pay the basic cost of the instructional program to be offered, the cost of transportation of pupils, the annual cost arising from capital outlay for school property, and the cost of re-housing rural schools in reorganized areas. (3: 98.) In the second place, if there is to be any assurance that the maximum educational results will be obtained for the money spent, the state must facilitate the organization of satisfactory attendance and administrative units for school purposes.

<sup>1</sup>Outside the cities, California has made as little progress in the elimination of the eight-grade elementary school as any state in the Union. The system of state apportionment together with an antiquated type of district organization seems to account for this condition.

THE RESPONSIBILITY OF THE STATE FOR THE SUPPORT  
OF PUBLIC EDUCATION

The foregoing discussion implies that the primary responsibility for the financial support of public schools rests upon the state. This is a well-established principle, upheld by numerous state and federal court decisions. Without exception it is held that the provision for public education and its control is a state function wholly under control of the state legislatures within the limitations set by the state constitutions.<sup>2</sup> In some states the constitutions prescribe certain minimum limits as to the extent of the educational program that shall be provided and require the legislature to make available certain financial support. It necessarily follows, therefore, that if public education is primarily a state function and responsibility, it is the obligation of the state to guarantee and even supply the financial resources to pay for the quality of educational opportunity required. Furthermore, the educational program that the state requires, or should require, depends upon the changing social and economic needs of the people and therefore should be flexible and progressive.

With respect to the financial support of public education there has been little relation between the responsibility of the state and the amount of support provided. As pointed out in Chapter I, the states have largely delegated the burden of financial support to local communities and subdivisions of the state government. The state governments, as such, are now furnishing an average of only 27.1 per cent of the funds for the support of public elementary and secondary schools. In some states, however, the amount furnished by the state is negligible, as for example, in Colorado where the state furnishes only one-tenth of one per cent of all funds for the support of elementary and secondary schools. Such facts strongly indicate that the states for the most part are negligent in the discharge of their financial obligation for the maintenance of public education. The best and most recent plans for discharging this obligation, insofar as apportionment is concerned, are here presented.

<sup>2</sup>See citations bottom of page 140, Chapter VI.

## PLANS OF SCHOOL SUPPORT

There are two chief sources of support for public schools: funds raised by local taxes, usually on property; and funds raised by the state and apportioned to the local school units. These two sources of support are complementary and if either is depended upon to the exclusion of the other the quality and extent of the educational program will suffer.

Where the support of the school program is derived largely from local taxation, the quality and extent of the educational program in any given unit is dependent upon the economic ability of that unit. The inability of many local units to support an acceptable minimum standard of educational facilities results in wide differences in educational opportunity. On the other hand, if the state assumes full responsibility for the support of the public schools and allows no provision for support through local taxation, local initiative and experimentation are stifled and an undesirable dead-level of educational opportunity is likely to result. In general, there are two plans by which the state can guarantee a minimum standard of educational support, the large-fund plan, and the small-fund plan.

**THE LARGE-FUND PLAN:** Under this plan the state pays the entire cost of the educational program up to some fixed minimum standard. This program may be provided merely by apportioning some lump-sum amount per pupil or per teacher to each of the local units, or by this method plus certain additional quotas to provide for costs due to peculiar circumstances, such as, the size of the school and extra services such as transportation. When the large-fund plan is adopted two points are of vital importance. In the first place, in determining the financial needs of any given school unit and in the making of the budget and in the apportionment of funds necessary to the execution of the budget the cost of all functions and services necessary to provide the established minimum program of educational opportunity should be taken into account. These functions include general control; instruction; operation and maintenance of the school plant; auxiliary agencies, such as, libraries, health service, and transportation; fixed charges, debt service; and capital outlay. In the second place, the power to levy certain local

taxes should be delegated to the local administrative units in order to raise funds to provide a better educational program than the minimum required and paid for by the state.

THE SMALL-FUND PLAN: Under this plan of apportioning state school funds the state requires some uniform effort, such as the levying of some fixed tax rate, by all the local school units of the state, and then supplements this amount sufficiently to provide a fixed minimum standard of educational opportunity. Under this plan it is desirable to equalize as nearly as possible the assessment of taxable property in the various local units, that is, to see that the assessed value of property in all local units bears some constant ratio to true valuation. Unless the required tax rate is very low, the failure to equalize assessment can vitiate the equity of the whole scheme of apportionment. It is also desirable that local units be permitted to raise funds by local taxes to pay for a better educational program than that required and guaranteed by the minimum standards of the state.<sup>3</sup>

#### SUMMARY

The size and characteristics of the local school unit, both attendance and administrative, have a very definite influence on the system of financial support of public schools and *vice versa*. These interrelationships are indicated in the following summary statements:

The influence which increasing the size of the local school unit has on the cost of the educational program will depend upon the factors in any particular situation. A better educational program may be obtained at the same cost, increased cost, or less cost than the program under smaller units, or it may happen that although the instructional program is not greatly changed, equality of financial burdens and economy in administration will result.

As a general rule the smaller and more numerous the local school units, the more complicated and cumbersome must be the method of apportioning equitably state school funds to local

<sup>3</sup>For details concerning plans of equalization used in Delaware, Maryland, and New York, see Swift's *Federal and State Policies in Public School Finance in the United States*. (6: 290-8.)

units. On the other hand, the larger the local school units, the simpler the method of state apportionment can be in order to be equitable. The method of apportioning state school funds to local units may be such as to hinder or to accelerate the reorganization of local school units.

The method of apportioning state funds to local school units may be such as to retard and hinder the desirable plan of school organization for instructional purposes, as, for example, in California where school organization according to the 6-3-3 or the 6-6 plan has been greatly retarded by the plan of apportioning state funds.

If adequate school units are to be maintained throughout a state the amount of state funds provided and the plan of apportionment must be sufficiently flexible to finance all the elements of a satisfactory program under all conditions. On the other hand, if the state is to receive the maximum returns for the money spent, it must spend its money through adequate local school units.

Since the state has plenary powers over the school system and complete responsibility for its control, the primary obligation for financial support rests with the state. The state can either discharge this obligation itself or require local units to do so. The latter course has been too largely pursued and the result has been inadequate support by the states.

There are two general plans for the state support of public schools: the large-fund plan whereby the state pays the entire cost of the minimum educational program; and the small-fund plan whereby the state guarantees the funds to pay the cost of the minimum educational program after the local unit has levied a specified minimum tax rate for schools. Under both plans the local units should be delegated power to raise funds locally to pay for an educational program better than the minimum required by the state.

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## CHAPTER VIII

### RESULTS OF THE REORGANIZATION OF LOCAL SCHOOL UNITS

If local school units are to be reorganized it is desirable to know the approximate results to be expected. From the previous chapters several conclusions as to possible results may be drawn. Hence this chapter is a summary of certain points previously developed. For the sake of clarity the results to be expected from the reorganization of attendance units and administrative units are treated separately.

The distinction between the two types of units is of the utmost importance. It is entirely possible that reorganization for either of these units to the exclusion or neglect of the other will preclude the achievement of desirable educational conditions. For example, a recent publication of the State Department of Education of Kentucky has shown conclusively that in many cases the large administrative unit has failed to obtain desirable school conditions because of failure to organize adequate attendance or school units (sub-districts). (8.) On the other hand, reorganization of attendance units may fail to bring adequate administrative and supervisory services at a reasonable cost where the attendance and administrative units are made coterminous, as has been done in many school consolidation programs.

#### RESULTS OF REORGANIZATION OF ATTENDANCE UNITS

The reorganization of attendance units usually has a more marked effect on the elementary schools than on high schools. This is true because in many instances schools have been re-

organized and consolidated in order to obtain high school facilities with but little attention to the improvement of elementary school conditions. For example, the superimposed and overlapping high school districts of Illinois and California have provided, for the most part, adequate high schools, but have provided only the most antiquated elementary school facilities. The reorganization of elementary attendance units results in schools of standard size that can offer adequate instructional programs organized on the basis of six years instead of the traditional eight years. In general, such schools have better attendance, better age-grade distribution of pupils, and produce better instructional results.<sup>1</sup>

The reorganization of attendance units is the most practical method of eliminating the small inefficient high school prevalent in rural areas. Larger high schools cost less per pupil and are, therefore, more economical financially than small high schools. The program of instruction in the large high school of 300 or more pupils is much broader and more nearly meets the social and intellectual needs of the pupils attending them than does the small high school. In fact it is only in the large high school that training through the six broad curricula: general completion; college preparatory; home-making; agriculture; commercial; and trade and industrial, can be offered in an economical manner. This has been demonstrated in numerous studies of the course offerings in high schools of various sizes.<sup>2</sup> Furthermore, the character and quality of school buildings and equipment are almost invariably improved by the organization of larger schools.<sup>3</sup>

The reorganization of attendance units usually results in the employment of fewer teachers and in the improvement of the qualifications of those teachers who are employed. The number of teachers employed is reduced through the elimination of small schools and small classes and the possibility of giving each teacher employed a standard teaching load.<sup>4</sup> (6.)

<sup>1</sup>See Chapter II, pages 23ff. and Chapter V, pages 85ff.

<sup>2</sup>See Chapter II, pages 19ff.

<sup>3</sup>See Chap. V, 12: 217-18. Statement also based on unpublished data in Arkansas State Department of Education concerning over 400 consolidated school districts.

<sup>4</sup>See examples below.

Certain data which tend to substantiate the points made above as to the results that may be expected from the reorganization of attendance or school units are to be found in three county school reorganization surveys made by the author.

RESULTS OF THE REORGANIZATION OF SCHOOL UNITS IN LOGAN COUNTY, ARKANSAS:<sup>5</sup> No better example of the advantages which accrue from consolidation can be found than Logan County which has been almost entirely consolidated. In 1926-27 there were 104 schools in the county, and in 1930-31 there were forty-one. In 1926-27 there were 210 teachers and in 1930-31 there were 149. During that period the school enumeration decreased 12 per cent, but the total days attended by all pupils increased 4.8 per cent. In 1926-27, 49 per cent of the enumerated children attended school, while in 1930-31, 52 per cent attended school. In 1926-27 there were only two modern school buildings in the whole county, and these accommodated a very small proportion of the students in the county, yet the school districts had a bonded debt of \$300,000. By increasing their bonded indebtedness by \$184,000, 90 per cent of the children of the county have been placed in standard school buildings. In 1926-27 there was only one free high school in the county, and that was operated for three months of the year by public donations. The average length of school term for the county was 6.3 months and only 170 pupils were in the free high schools. In 1930-31 there were 900 pupils enrolled in free high schools. In 1928-29 only 28 per cent of the teachers had two years or more of professional training. In 1931-32, 80 per cent had two or more years of college training.

The average annual salary for teachers in Logan County in 1926-27 was \$602. This multiplied by the seventy-two teachers who have been eliminated indicates that \$43,344 has been saved annually in teachers' salaries. The transportation cost for the county is \$2,557 per month, plus the depreciation on the buses. If the schools were run for 6.3 months now as they were in 1926-27 the total cost of transportation including deprecia-

<sup>5</sup>Arkansas State Board of Education. *A Survey of the Public Schools of Arkansas*. State Department of Education, Little Rock, Arkansas, March, 1932, pp. 13-14.

tion on buses would be less than \$23,000. The annual payment on the increased indebtedness of the district is \$16,100. This amount added to the cost of transportation would make an additional cost of \$39,100 whereas \$43,344 was saved in teachers' salaries. In other words, if the people of Logan County were content to run their schools for 6.3 months they could do it for \$4,244 less cost annually than they spent before the consolidations were effected. Not only would the schools cost less, but five times as many pupils would be accommodated in high schools as in 1926-27 and they would be taught by teachers with much better training. The increase in the cost of the schools in Logan County is not the result of consolidation, but because the people have demanded longer school terms.

RESULTS OF THE REORGANIZATION OF SCHOOL UNITS IN PULASKI COUNTY, ARKANSAS:<sup>6</sup> Prior to 1927 the rural schools of Pulaski County were administered as thirty-eight local school districts under the control of 177 school directors. In 1927 the legislature authorized the organization of all of the county outside of Little Rock and North Little Rock into a modified county unit school system of schools, under the control of the county board of education.

Under the county unit system the county board of education has complete control of the administration of the schools outside of the two cities. They make provisions for the location and erection of school buildings, employ teachers, contract indebtedness, and control the budget of the school system. In the office of the county board of education are the county superintendent, assistant superintendent, business manager, clerk, supervisor of Negro schools, county health nurse, and repairman.

Since October, 1927, the number of white schools has been reduced from fifty-eight to twenty-nine, and the number of Negro schools from fifty-two to thirty-two. In 1927, 52.6 per cent of all white children were enrolled in one and two-teacher schools, whereas in 1930 only 8.9 per cent were enrolled in these small schools. In 1927 only 29.3 per cent of all white children

<sup>6</sup>Dawson, Howard A., and Henderson, D. T. *An Educational Survey of Pulaski County, Arkansas, Rural Schools*. Pulaski County Board of Education, Little Rock, Arkansas, 1930, pp. 38-42.

were attending schools having six teachers or more, but in 1930, 68.5 per cent of all children were enrolled in these large schools. In 1927 there were no Negro schools having more than five teachers. In 1930, 32 per cent of all Negro children were in schools having five teachers or more, and 65 per cent were in schools having four teachers or more.

In 1928, 40 per cent of all white children attended schools that were in session less than eight months per year. In 1930 no schools were in session less than eight months, and 70.1 per cent of all white children were in schools that were in session nine months. In 1927, 42 per cent of all Negro children were in schools that were in session less than seven months. In 1930 there were no Negro schools with less than seven months, 81.4 per cent being in schools running seven months, and 18.6 per cent in schools running eight months.

Since 1927 there has been a general improvement in the grade distribution of children enrolled in school. There is a smaller percentage of enrollment in the first three grades, while in the high school there has been an increase of more than 100 per cent in enrollment. This is true in both white and Negro schools. Since 1927 the percentage of white school population enrolled in school has increased from 70.5 per cent to 80.4 per cent. The percentage of Negro school population enrolled in school has remained approximately the same, although the average daily attendance for the Negroes has increased from 46 to 52 per cent of the school census.

In both white and Negro schools, more of the children are of normal age for their grades than in 1927. In 1927, 43 per cent of all white children were too old for their grades; in 1930 this had been reduced to 34 per cent. In the Negro schools having four teachers or more in 1927, 70.3 per cent were over-age; whereas the percentage was 68 in 1930. For all Negro schools the percentages are about the same for the two years under consideration, although considerable improvement has taken place in the larger schools.

In 1930 only 2 per cent of the total white elementary school enrollment was in schools that were not classified and rated by the State Department of Education, as compared with 13.6 per cent for the year 1928-29, the first year in which elemen-

tary schools were classified. In A and B class elementary schools there were 2,020 pupils; in C and D class schools, 750 pupils. In 1930 there were three A class high schools and two B class high schools enrolling a total of 640 pupils. This is twice as many pupils as were enrolled in 1927, when there were no A class high schools, only one B class high school, and three C class high schools.

In 1927 the average value of school property per white child enrolled was \$44.22. In 1930 this had increased to \$110.33. For Negro children the average value for school property per child enrolled was \$34.30 in 1927, and \$28.77 in 1930. Although this represents a slight reduction in the average, there is considerable more equality in the valuation of property throughout the country as a whole.

In 1927, when there were thirty-eight school districts, the assessed valuation of property per child enrolled in school ranged from \$246 in District No. 49, to \$4,407 in District No. 22. Twenty-five per cent of the children lived in districts that had more than \$1,200 assessed valuation per child, while another 25 per cent lived in districts that had less than \$600. In 1930 all of the wealth of the county was used for the education of all the children in the county, the average assessed valuation per child being \$1,272.<sup>7</sup>

In 1927 the salaries of the white teachers in the elementary schools ranged from \$250 to \$1,400 annually. In 1930 this variation was from \$600 to \$1,500, the average being \$827. In the high school the average salary per white teacher in 1927 was \$1,027; in 1930, the average was \$990. The change in the average was brought about by the elimination of the few highly paid teachers in the wealthy districts. The average salary per Negro teacher in 1927 was \$532; and in 1930, \$517.

From 1927 to 1930 the average training for white elementary teachers increased from four years high school to two years normal school or college. The average for white high school teachers increased from two years college in 1927 to three years in 1930. In 1927 there were only seven college

<sup>7</sup>These facts show the advantages of the large administrative unit rather than the large attendance unit.

graduates teaching in high schools, while in 1930 there were twenty-three. The average training of Negro teachers in 1927 was four years high school; in 1930, it was one year of college training. Among the high school Negro teachers in 1927 the average training was one year of college; and in 1930, three years.

The average tenure of white teachers in 1927 was six years; in 1930, it was four years. This change in the average has been brought about by the employment of additional high school teachers. The average tenure for white elementary teachers was five years both in 1927 and 1930. The average tenure of Negro teachers was ten years in 1927 and in 1930 twelve years. Both the training and tenure of Negro teachers is higher in Pulaski County than in any other county in the state.

In the survey of this county recommendations for further consolidations were made. In accordance with these recommendations the number of white schools was reduced from twenty-nine to twenty-two and the number of Negro schools from thirty-three to twenty. As a result of these consolidations, the number of teachers was decreased by thirty-three at a saving of \$23,718 per year. At the time the survey was made the cost of transportation ranged from 30.5 per cent under the standard uniform rate for service rendered to 88.7 per cent more than the standard uniform rate. Transportation was costing \$45,610 per year for 2,100 children. Under the reorganized system the cost was only \$45,523.50 per year for 2,918 children. The range in cost per pupil for instruction in the different schools was greatly reduced. The range was from \$30.00 to \$133.00, but after the reorganization the range was only \$30.00 to \$58.00. (8: 58, 95-6, 104).

RESULTS EXPECTED FROM THE REORGANIZATION OF SCHOOL UNITS IN MERCER COUNTY, WEST VIRGINIA:<sup>8</sup> The number of schools in Mercer County will be immediately reduced from 184 to ninety-two and finally to fifty-one, making an immediate reduction of 50 per cent and a final reduction of 72 per cent. The number of teachers employed will be reduced from 607 to

<sup>8</sup>Dawson, Howard A., and Cavins, L. V. *An Administrative Survey of the Public Schools of Mercer County, West Virginia*. State Department of Education, Charleston, West Virginia, 1932, pp. 118-19.

512, and the final number required in the fully expanded system will be 538. This makes an immediate reduction of sixty-nine teachers or 11.37 per cent.

Under the proposed system 93.1 per cent of the elementary pupils will be placed in schools having more than six teachers, and 96.4 per cent of the high school pupils will be in schools employing more than six teachers. At the present time more than 56 per cent of all elementary pupils are in schools having less than six teachers, and 12.7 per cent of all high school pupils are in schools having less than six teachers. In fact, 18 per cent of the elementary pupils are now in one-room schools. Under the proposed reorganization, the number of elementary pupils in schools having more than twelve teachers will be increased from 25.5 to 54 per cent, and finally to nearly 68 per cent. In high schools employing more than eleven teachers the percentage will be increased from 72.68 per cent to 90 per cent when the program is completed.

Variations in cost of current expense per pupil will be considerably reduced under the proposed organization. The average current expenditures for the elementary pupil will be increased in each district except Plymouth, but in no district except Jumping Branch will the increase amount to more than \$4.00 per pupil. The average per pupil cost for current expenses in high schools will be decreased in each district. The decrease per pupil will range from \$21.00 in the Jumping Branch District to \$3.00 in Beaver Pond. Taking the schools as a whole, there will not be a great deal of difference between the per capita cost for current expense of the present system and under the reorganized system. The chief difference will be in the character of the schools. In other words, better schools can be obtained for approximately the same per capita cost. The number of pupils to be transported to school will be increased from approximately 1,100 to almost 4,900, but the cost will increase only from approximately \$3,200 to \$6,100. The cost per pupil per day will be decreased from 14.4 cents to 6.5 cents. Although the number of pupils will be increased about 340 per cent, the cost will be only approximately doubled.

The tax rates under the proposed system will be decreased approximately 3.5 per cent below the tax rates in operation for

the year 1930-31. The decrease ranges from 1.5 per cent in the Bluefield Sub-district to 13.1 per cent in the East River District. The only increase in tax rates will occur in Jumping Branch District. If the 1931 assessments were on the basis of those in 1930, the decrease in tax rates would be approximately twice as great as is calculated.

The total current expense of operating the schools under the proposed organization is estimated at \$865,719 as compared with \$977,360 for the year 1930-31. The grand total expense including debt service for the proposed system is \$950,917 as compared with \$1,080,710 for 1930-31. The total reduction in expenditures will amount to 12 per cent. This percentage of reduction will occur in spite of the fact that the assessed valuation of property from 1930 to 1931 had already been reduced 12.7 per cent.

The conclusion that superior schools can be purchased for less money and lower tax rates than are now being obtained under the present organization in Mercer County seems to be justified by the facts presented above.

#### RESULTS TO BE EXPECTED FROM THE REORGANIZATION OF LOCAL ADMINISTRATION UNITS

If local units of school administration are so reorganized as to have at least 1,600 pupils and forty-five teaching units, it is possible<sup>9</sup> to have the administrative and supervisory services necessary for a complete educational program at a reasonable cost. These services, which consist of educational and business management, supervision of instruction, health, census, and attendance supervision, are rarely found in small administrative units. When they are provided their cost bears an unreasonable relationship to the total cost of the educational program. On the other hand, these services are usually found at reasonable costs in large administrative units.

One of the chief results to be expected from the reorganization of local administrative units is the more efficient and economical use of school funds. Better provision can be made for the preparation of budgets, more economical purchase of supplies and equipment in large quantities, the collection of local

<sup>9</sup>See Chapter IV.

revenues, and the safeguarding of funds. Data concerning the extent to which all of these benefits usually accrue are limited, but such evidence as is available and expert opinion indicate that they may reasonably be expected in large units to a much higher degree than in small units. For the most part, except where budgets are required by state law and supervised by state officials, budget making and execution is inefficiently handled in small administrative units. It is only in the cities and the county systems that budget making has developed as a matter of good local administration. As to the purchase of supplies and equipment, it is a well-known fact in all businesses that large quantities can be purchased more economically than small ones. Furthermore, many of the school surveys have given factual evidence of this point. (3.) Large administrative units almost invariably collect local taxes at a smaller percentage of cost than do small units. In states where the school unit is not responsible for the collection of taxes, this function is performed by a governmental unit larger than the school units. This condition indicates that a large administrative unit is a more efficient agent for the collection of taxes than a small unit. (7: 492-3.) There is considerable evidence that the larger administrative units can and do more effectively safeguard funds through depository and official bonds. An excellent demonstration of this fact has been made by Cammack for the State of Kentucky. (2.)

It has been pointed out that the size of the local administrative unit has a definite bearing on the method of apportioning state school funds. In other words, the larger the unit the simpler the method or plan of apportionment, and the easier the equitable distribution of state funds.<sup>10</sup>

Large administrative units also make possible larger attendance or school units. As indicated in Chapter V, the larger administrative units have larger schools, the average sized school in county unit states being more than twice the size of the average in common school district states. Furthermore, the large administrative unit facilitates the reorganization of schools. Under the large unit the matter of reorganizing and

<sup>10</sup>See Chapter VII.

consolidating schools is usually left to the discretion of the school board, while under small units reorganization and consolidation can take place usually only through the tedious and cumbersome method of elections and petitions.

Finally, large administrative school units are one of the most effective means of equalizing the taxable wealth and the tax rates necessary to support schools.<sup>11</sup> There is no more thoroughly demonstrated fact in the fields of school administration and school finance than the wide variations in economic ability to support schools. It is equally well demonstrated that the consolidation of small units into larger ones does more to lessen these variations than anything else except perhaps an adequate plan of state equalization of financial support of schools. (9: Chap VI.)

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<sup>11</sup>See Chapter V.

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