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DEPARTMENT OF THE INTERIOR  
BUREAU OF EDUCATION

BULLETIN, 1918, No. 28

THE PUBLIC SCHOOLS OF  
COLUMBIA, SOUTH CAROLINA

REPORT OF A SURVEY MADE UNDER  
THE DIRECTION OF THE COMMISSIONER  
OF EDUCATION



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1918



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DEPARTMENT OF THE INTERIOR  
U. S. BUREAU OF EDUCATION

BULLETIN, 1918, No. 28

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COLUMBIA, SOUTH CAROLINA

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## LETTER OF TRANSMITTAL.

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DEPARTMENT OF THE INTERIOR,  
BUREAU OF EDUCATION,  
*Washington, October 10, 1918.*

SIR: I am transmitting herewith a report of a survey of the public schools of Columbia, S. C., made under my direction at the request of the board of school commissioners of Columbia. I recommend that this report be published as a bulletin of the Bureau of Education, for distribution among the school officers and citizens of Columbia and among students of education throughout the country.

Respectfully submitted.

P. P. CLAXTON,  
*Commissioner.*

The SECRETARY OF THE INTERIOR.



## FOREWORD BY THE SURVEY COMMITTEE.

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With cities, as with men and women, judgment should not be rendered on achievement alone, for the will to achieve and the effort to achieve, in the end, count for more than mere accomplishment. In the attempt to measure the educational progress of any city, then, account should be taken of the difficulties which have been encountered, the effort which has been put forth in overcoming these, the distance traversed from the starting point. Moreover, there is no one best way known in anything educational. There are some ways which are better than others, but many of the ways which are considered best to-day will be discarded within 10 years, just as many of the practices which were thought best a decade ago are now in disrepute. The educational process is not static; it is not a cut-and-dried affair; it is not a dead thing; it is alive, and as everything which is alive is constantly changing, so it is with education. It can not be learned in a normal school, nor in a university; it can not be gotten out of a book, nor from the pages of a journal; these merely help. In fact, the educational process can not be gotten anywhere, for it is incessantly shifting, changing, growing; it is in a state of flux, to-day something, to-morrow something different, and the next day something else.

This is true because educational ideals and consequent practice are merely expressions of the way the mind of the group thinks about how its young should be trained. There can not be any question that the community group has a mind. The politician knows it; so does the reformer; so does the preacher; and the educational leader for each continually appeals to this community mind, trying to enlist its interest, trying to secure its indorsement of his proposals, trying to get it to put these into practical effect. The community mind, usually, is not so variable as the mind of the individual; it is more conservative, harder to convince, less emotional about the things which secure its attention, and it takes a more impersonal view of matters which interest it; nevertheless, it does change its view. It can be influenced by individuals, and it does respond, though slowly, to the social mind of community groups outside itself. Because it is changing its conception of its own needs, and thereby its conception of the educational needs of its youth, so, of necessity, must educational practice change in conformity thereto. It is foolish, therefore, for anyone to say dogmatically what educational practice should be, for no one

knows what it should be, because no one knows what the social mind of the larger community, which is bigger than any local community, is going to think about its own needs and the best ways of training its youth to meet them.

Mindful, then, of these facts the survey committee has not undertaken, in arbitrary fashion, to tell Columbia what her school system should be, nor how near the ideal in accomplishment she is, nor how far away from it. This committee is not competent to define the ideal school system nor the ideal school practice. It can, however, bring to Columbia's attention those practices which are generally held by other communities, for the present, at least, to be the best. It can compare and contrast Columbia's accomplishment with that of other communities in respect to these better ways. It can examine the difficulties which have confronted Columbia in creating her system, and can compare the effort which she has made to overcome her handicaps with that made by other cities. It can determine how much of the interest that touches the pocketbook the citizens of Columbia are taking in their schools. It can determine, too, whether the teachers, school officials, and citizens of the community are resting in self-satisfied pride of accomplishment or whether they are eagerly seeking on every hand to burst through the bonds of their limitations. It can tell whether teachers are availing themselves of every opportunity at hand for self-improvement, and if not, it can point, perhaps, to some of the conditions which have inhibited effort. It can tell whether the teachers are wisely and inspiringly led into new pathways of educational progress, the treading of which brings an influx of new strength and the daily renewal of satisfaction. It can tell whether the conditions under which the children are working tend to establish in the consciousness of each the habit of success, or whether the school is starting the child on a career characterized by the thought of failure. In short, the committee feels that it lies within its proper province to determine, inferentially at least, whether Columbia's school system in all of its parts is a live thing, growing, functioning, making blunders perhaps, but dynamic nevertheless, or whether the forces prevail which tend to bring about a static condition.

To the study of these questions the committee has come with the utmost sympathy, but with a desire to speak the truth with complete frankness. In its effort to get at the facts it has received the unhesitating cooperation of the school commissioners, the superintendent, and the entire school corps.

In its recommendations the committee has been careful to suggest nothing which has not been thoroughly tested in other communities and has not become a part of established practice. The committee feels that Columbia can afford to give to her children an

educational opportunity which is the equal of that offered by the most favored cities of her class. Its recommendations have been made with this objective clearly in view. It will be impossible, and indeed, undesirable, to attempt to put into immediate effect all of the suggestions which the committee offers. The committee feels, however, that as the board of school commissioners develops its plans for the future of the schools of Columbia, it will make no mistake if it gives objective expression to this suggested program.

In justice to the superintendent of the schools the fact should be mentioned that from time to time in his annual reports to the board of school commissioners he has suggested many of the things which this committee recommends.

The survey was made by the United States Bureau of Education at the request of the Columbia board of school commissioners. The survey committee comprises the following members:

Frank F. Bunker, Bureau of Education, director of the survey.

Carleton B. Gibson, superintendent of schools, Savannah, Ga.

Henrietta W. Calvin, Bureau of Education.

J. L. Randall, Bureau of Education.

H. H. Baish, Bureau of Education.





# THE PUBLIC SCHOOLS OF COLUMBIA, SOUTH CAROLINA.

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## I.—THE CITY OF COLUMBIA, SOUTH CAROLINA, AND THE RISE OF THE PUBLIC-SCHOOL SYSTEM.

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### 1. THE CITY OF COLUMBIA.<sup>1</sup>

The city of Columbia stands at the confluence of the Broad and Saluda Rivers, where they break through the irregular, sand hill belt which extends across South Carolina midway between the Blue Ridge Mountains and the coast, paralleling them both. The early history of this region is a story of bold hunters following herds of buffalo and the trail of the deer into territory previously unknown; of trading parties bartering at Indian camps for furs and hides; of terrified women and children scurrying to the forts which had been established at various points for protection from marauding Indians; of punitive military expeditions pushing into the interior from Charleston and returning decimated by fever, plague, and hardship; and of appeals to the English governor, representing the provincial government, for guns, ammunition, and military protection. Then came a period when settlements began to spring up at various points—a group of Scotch-Irish immigrants on the north-east bank of the Congaree, in what is now Richland County; a group of Germans on the Broad, at the mouth of Kinslers Creek; some German and Swiss emigrants from Orangeburg settling at the juncture of Little River, Cane Creek, and Kinslers Creek; and immigrants from Virginia. The largest and most important settlement of all these came to be known as "The Congarees."

A ferry across the river was installed at this point; flour mills of primitive character were established; a line of 30 to 60 ton boats was put on to ply between the settlement and Charleston; and by Revolutionary times the community had developed a group consciousness, for it is of record that during this period the settlement demanded that the district be divided and a court established, urg-

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<sup>1</sup> Many of the facts contained in this historical sketch were taken from a compilation made by John M. Bateman and entitled "A Columbia Scrapbook."

ing, in support, the fact that the settlement was nearly 40 miles "from the shire."

After the capture of Charleston by the British in 1780 Lord Cornwallis was sent into the interior to clear the region of hostile troops and to establish military posts on the frontier. Coming to the Congaree, he seized a house near the ferry, raised a parapet about it, arranged his batteries, cut down trees and constructed an abatis, and called the finished work "Fort Granby," after the Marquis of Granby, on whose staff Cornwallis had once served. After the Revolution a town called Granby sprang up around the fort; and as it was at the head of navigation on the Congaree, with a ferry leading to the up country, with broad and fertile swamp lands extending many miles below, Granby came to be a place of considerable business, with a population comprising a circle of well-to-do, refined, and educated people.

By a treaty with the Cherokees, in 1755, Gov. Glen secured a large addition to the territory of the Colony out of which the counties of Edgefield, Abbeville, Laurens, Newberry, Union, Spartanburg, York, Chester, Fairfield, and Richland (embracing the site of Granby), were later formed. Into this new territory settlers came rapidly from Pennsylvania and Virginia, but a wide belt of uninhabited country separated these communities from Charleston, the seat of government, which was the only place at which the court was held or the general assembly convened. In consequence of the hardships endured by those of the "upper country" in reaching Charleston, the demand for a more centrally located capital became insistent. In 1785 the matter was first considered by the general assembly and a committee was appointed to recommend a meeting place for the legislature. After much discussion and over the protests of the people of the "lower country," a bill was put through during the session of 1786 which, when finally amended, provided for the election of a body of legislators who were authorized to select a tract of land near the Congaree ferry, 2 miles square; to break it up into lots of a half acre each; to reserve 4 acres for public buildings; to sell one-fourth of the lots; whereupon a contract was to be let for the erection thereon of a statehouse.

Every purchaser of a lot was obligated to build thereon, within two years, "a good two-story wood or brick house, with brick or stone chimneys, not less than 30 feet long and 18 feet wide in the clear," or failing therein to forfeit the lot. No name was provided for the town, but a blank space was left in the bill to be filled by the legislature when the name should be determined. One senator suggested, in derision, that the new town should be called the "Town of Refuge" because, as he asserted, the town was to be erected at a point "without the pale of justice, situated in a place where sheriffs

were harmless and inoffensive, and where laws were laughed at and despised." The names finally voted upon were "Washington" and "Columbia." The latter receiving a majority vote was declared to be the name of the new capital. When the constitutional assembly was held in 1790 an attempt was made to have the capital removed to Charleston, but by a margin of one vote it was decided to retain Columbia permanently as the seat of government.

During the first 19 years of its existence, the town of Columbia was governed by commissioners elected by the legislature, but in 1805 the growth of the population and the need of making and enforcing many local regulations raised so many questions of detail with which the legislature could not properly be occupied that authorization was granted for the incorporation of the town. By 1842 a new era had opened, for in this year the railroad pushing out of Charleston finally reached Columbia. Since the coming of the railroad and the things a railroad always brings to a community, the growth of Columbia in population and prosperity has been steady, interrupted for a time by the bitter struggle of the Civil War and the accompanying desolation and destruction, but now firmly established upon a solid economic basis which points unerringly to a promising future.

To-day Columbia is a city with a population of about 40,000, with a property assessment roll of \$15,500,000; with bank deposits aggregating \$11,000,000; and with bank clearings of \$1,000,000 per week. Railroads radiate in 11 directions and furnish 144 regular trains daily; there are 25 miles of street car track; 90 miles of sewers; a modern water plant insuring good water at high pressure; a 25,000 horsepower electric plant; 9 hotels; 10 colleges; 11 public schools; 450 miles of modern sand-clay roads radiating to every part of the adjacent territory. Columbia is also rapidly coming to be an important factor in manufacturing enterprises; 79 establishments with a combined capital of nearly \$12,000,000 are situated either within the city limits or very close thereto. In 1916 the value of the output of these factories reached \$15,000,000. The cotton goods alone manufactured in one year, if put together yard by yard, would reach around the earth once and with 500 miles left over on the next lap. There are to be found here also 3 "skyscraper" office buildings of 10, 12, and 15 stories, respectively; 51 churches representing many religious denominations; a six-story Young Men's Christian Association building with 83 rooms in its dormitory; a Young Women's Christian Association building; a chamber of commerce; and a \$265,000 Government post office in course of erection.

Moreover, it should be noted, Columbia is situated at the center of a large and prosperous rural district. Its location, at the southeastern edge of Richland County, makes it not only the natural busi-

ness center of Lexington County as well, but the natural distributing point, also, for a large territory embracing portions of adjacent counties. A circle having a diameter of 100 miles with Columbia at the center would contain the whole or a part of 14 counties comprising from 20 to 30 thousand farmers who are tilling property having an aggregate value of \$100,000,000. Within this area the capital invested in agricultural pursuits is far greater than that invested in all other enterprises combined.

## 2. THE RISE OF THE PUBLIC-SCHOOL SYSTEM,

By action of the general assembly, taken in December, 1880, the State school law of 1878 was amended and provision made whereby the area embraced within the corporate limits of Columbia became a separate school district. This act placed the management and control of the new district in a board of school commissioners consisting of five members, one to be selected from each of four wards of the city (when the commission form of government was adopted and the wards abolished the commissioners were elected at large) and the fifth to be selected by the city council from among their own number. In 1883 the number was increased to seven, the two additional members being appointed by the governor upon the recommendation of the trustees of Columbia Academy. In addition to the usual duties devolving upon school commissioners, authority was given the board to hold, annually, an election for the purpose of levying a local tax on all real and personal property for the maintenance of the school system. Under the act an election for school commissioners was held in January, 1881. The new board, in turn, very soon called an election to authorize the levying of a special tax for school support, but the measure was defeated. A second call was made the year following, but again the greatly needed maintenance was withheld. To quote the official report of 1883-84:

At this time the condition of the city schools was deplorable. The school fund apportioned to the city from the county was totally inadequate for their proper support. The accommodations for white pupils were utterly insufficient, and the attendance upon these schools—never very great—dwindled down to a very small number. Very few of the citizens of the community availed themselves of these schools. The total attendance for the past two years had scarcely averaged 500, and of these a large majority were colored children. The length of the school session was but a little over three months. As the general school fund of the county is distributed in each school district in proportion to the number of children attending the public schools in that district, it follows that as the school attendance falls off, the revenue of the school district falls off in like proportion. As a result of this state of affairs, although the City of Columbia pays into the general county fund about \$7,500 annually, yet on account of the small attendance on the public schools the city has been yearly receiving in return scarcely over \$1,700 as its proportion of this fund.

This situation led to a systematic attempt to get before the voters of the district the deplorable condition the schools were in, with the result that public interest in the school movement became aroused to an extent "never before known in the city," with the consequence that, upon making the third attempt, in January, 1883, a local tax for school purposes of 1 mill was authorized.

Early in the same year, 1883, the board took up the problem of school organization. At the time the board controlled only two buildings—the Sidney Park School for white children, and the Howard School for negroes. The first step in meeting the difficulty of inadequate room was taken by making an appeal to the trustees of the male and female academies (Columbia Academy) for the use by the white children of the city of the two buildings controlled by them.

The board of trustees of Columbia Academy, it should be stated, is a self-perpetuated board created by the legislature of 1792 for the purpose of establishing a free school in Columbia. The act provided that the commissioners of Columbia convey, for the purpose, to the first board of trustees and to their successors "as trustees for the free school at Columbia," one of the "outsquares" or squares outside a certain exempted area, of 4 acres of land which were reserved for the use of the public. In 1795 a legislative committee appointed to consider the matter recommended that the trustees (of the academy) "may be authorized by law to raise by lottery a sum of money not exceeding 1,200 pounds to enable them to carry the said laudable institution into effect." Three years later an act was passed providing that the funds arising from taxes, licenses, fines, etc., should be applied to keeping the market in repair, opening and keeping in repair certain streets, payment of salaries, and the surplus, if any, was to be paid over to the trustees of the academy to be used by them for the interests of the institution in whatever way they deemed best. Further maintenance support was obtained through a provision that half of the profits accruing from the ferry across the Congaree, which had been established in 1799 to take the place of the bridge destroyed by the flood of 1796, should go to the academy.

For a period of years the male academy was situated on Sumpter Street, between Blanding and Laurel, while the female academy was erected three blocks distant on the site of what is now the public high school. The male academy was moved later, however, to a site donated by Gov. Taylor, and which comprised the block bounded by Laurel, Richland, Pickens, and Henderson Streets. Here it remained until 1905 when it was removed to make way for the present Taylor public elementary school.

This was the situation when the board of school commissioners petitioned the trustees of Columbia Academy for the use of the two

buildings which were under their management, urging in support of their request that the proposed public school organization would better meet the object of the founders to provide for the education of the people of Columbia in the broadest and most permanent sense; that there were no subjects taught in the best private schools which might not properly be included in public school instruction; that the public schools admit of better gradation, more economical instruction, and greater efficiency; and that it is proposed that the lower grades shall be free to all, though the higher grades "may for the present, at least, be supplemented by a small tuition fee."

The request was granted, and the two academy buildings were leased to the school commissioners for a term of years. This arrangement continued until 1894, when the property was conveyed to the school board in perpetuity upon the payment of a yearly sum of \$100 for a period of 10 years and on condition that there shall be at all times at least two members on the board of city school commissioners who shall have been nominated by the trustees of the Columbia Academy and commissioned by the governor. The Columbia Academy board of trustees still exists, though without property or duties other than to name two members of the school commissioners.

Thus there came into the control of the school board engaged in the task of organizing the school system adequate buildings for the time and with no more than a nominal expenditure of funds. At the same time a contribution of \$1,000 was made from the Peabody fund to be applied to the salary of a superintendent. A superintendent familiar with the plan of graded schools was soon secured, Mr. David B. Johnson, a Tennessean, and at the time superintendent of schools at Newbern, N. C. On September 28, 1883, the older boys of the city assembled at the male academy building; the girls and the younger boys at the female academy building; the negro pupils, both boys and girls, at the Howard building; and the public school system of the city was launched.

To quote from the report of 1883-84:

On Friday, the 28th day of September, the day of the opening, the city bell struck 13 strokes at 8.30 a. m. as a warning, and in obedience to the summons the children began to flock to the several school buildings from every quarter of the city. Promptly at 9 o'clock the opening exercises were held in every schoolroom. Until 2 o'clock the regular routine was proceeded with, and some recitations were had. Thus it was that provision had been made in advance for every pupil who entered, and 930 children—550 white and 380 colored—presented themselves on the first day and were accommodated without delay, confusion, or inconvenience.

Prior to the opening day, and preparatory thereto, the board had adopted a plan of school organization which embraced among others the following features: An annual election of teachers whose qualifications should be reviewed by the superintendent; a nine months'

session with the promotion of pupils made annually and determined by a formal written examination held during the next to the last week of the school year, followed by a public oral examination during the last week; a detailed course of study covering 10 years or grades, the 3 upper being considered high-school grades; a list of textbooks to be purchased by the pupils; a single session each school day, from 9 a. m. to 2 p. m., with two 15-minute recesses; the holding each month by the superintendent of a three-hour meeting of the teachers "for the purpose of conducting a systematic course of study prescribed by him"; a tuition fee of \$2.50 per month for all children of high-school grade—that is, all above the seventh; and the appointment of an official "board of visitors," consisting of the mayor and the aldermen of the city, which body was expected to visit the schools from time to time and suggest means for promoting the efficiency and success of the schools.

## II.—ARE THE SCHOOLS OF COLUMBIA ADEQUATELY SUPPORTED?

---

### 1. THE EARLY STRUGGLE TO ORGANIZE THE SYSTEM.

The system was not inaugurated without a bitter struggle extending over several years and contested at every step by citizens who protested against "taxing one man's property to educate another man's child." Indeed, the movement toward a State-supported, State-controlled system which would provide free schooling for rich and poor alike was retarded in South Carolina as in other Southern States. From colonial days well-to-do families had attended to the education of their own sons and daughters, in many instances sending them abroad for their training. To meet the need of those who prized education, yet could not afford the expense of European schools, a swarm of private pay schools had arisen. It had long been the policy of the State to leave elementary education to the parents, and of the poor particularly to private and parochial efforts, and to associations, such as the Hibernian, the German, and other societies of national scope.

In 1811 the State provided a fund the income from which was to secure to every citizen the benefits of an education, but it included the unfortunate provision that "if the fund should prove inadequate for all applicants, preference should be given to the poor." The fund was small and was entirely absorbed by the preferred class. Children of the well-to-do were excluded, and the schools, in so far as they were independent institutions, degenerated into pauper schools. Only those could avail themselves of the benefits of the measure who accepted it as charity or who made a declaration of pauperism. Not until 1868 was constitutional provision made for the appointment of a State superintendent and for the establishment of "a liberal and uniform system of free public schools throughout the State."

In part, then, due to a strong sentiment favoring private-school instruction or instruction within the family by means of tutors; in part due to the stigma of pauperism which the schools inherited from a former period; and in part due to the impoverished condition of the South following the war and from which the country was slow in recovering, support of public schools was reluctantly given and in meager amounts only. Indeed, in Columbia long before the close of the first year's session the maintenance fund was completely exhausted. The 1-mill tax, so begrudgingly allowed, yielded but \$3,200 and much of this had to be expended in rehabilitating the two



buildings which the trustees of Columbia Academy had permitted the school commissioners to occupy. These buildings were constructed so as to house the teachers and their families on the upper floors, while but two rooms on the ground floor of each building were reserved for classroom purposes. Inasmuch as the tax levy had been secured with the understanding that a nine months' term would be held, it was felt that failure to keep open for the stipulated time would mean a loss of confidence endangering a levy for the following year; so special efforts were made to keep the schools running for the designated time. Interested parents contributed amounts; the city council appropriated \$900; and friends in Columbia and elsewhere supplemented these sums with a sufficient amount to enable the school officials to meet all of their obligations.

## 2. EFFORTS TO OBTAIN SUITABLE BUILDINGS.

This ultraconservative attitude of the citizens of Columbia in respect to adequate support of their schools is well illustrated by the story of the efforts made to secure proper seating facilities for the children of the city as the population increased. Though the public-school system was organized in 1883 and housed in borrowed buildings, it was not until 15 years later, in 1898, that any provision was made for additional buildings, and even then only a two-room building known as the Blossom Street School was erected. In 1903, or 20 years after the organization of the schools, the equipment consisted of but five buildings valued in the aggregate at \$22,500; furniture valued at \$4,000; and school lots worth about \$27,000. The situation was so bad as to lead the superintendent to say in his published report of that year:

Well-informed persons have stated that South Carolina has the poorest school buildings in the United States, and that Columbia has, for a city of its importance, the poorest buildings in South Carolina. It is humiliating to say it, but this statement is unquestionably true, especially with reference to Columbia.

Three years later, in his 1906-7 report, the superintendent again speaks of the inadequacy of building facilities saying:

In recent years, the city has spent \$700,000 on permanent improvements, but of this large amount only \$50,000 was used in the construction of new school-houses. The record, then, is that 93 per cent of the funds invested by the city in permanent improvements during the past 10 years was used in constructing sidewalks, engine houses, opera house, sewers, and waterworks, while only 7 per cent went to school buildings. It is doubtful if this showing, as discouraging as it is, would have been made, had not the school board appropriated half the amount used for the erection of the schools from the regular income to the schools, while the teachers were being paid salaries sufficiently small to make living a burden sufficiently large to prevent them from concentrating their best efforts on their school work.

Efforts to arouse the public to a sense of the worth of their schools and to the realization of a need for proper buildings of a modern type were made from time to time, but yielded no tangible results for 22 years. In 1905, however, a building program was entered upon which gave, within the next 12 years a group of new buildings, for the most part, well lighted, well ventilated, with proper means for adequate heating, with modern sanitary conveniences of approved type, and withal with pleasing architectural appearance. This program, completed with the erection of the present high-school building, provides a total seating capacity of 5,766. Inasmuch, however, as the 1917 report shows an enrollment of 6,104, with an average daily attendance of 4,555, it is clear that the housing accommodations for the children of Columbia are barely sufficient for the present and must be increased with the growth of the city and with better attendance.

This building program cost about \$465,000, of which amount only \$250,000 was raised through the issuance of bonds. Of the remaining \$215,000, \$40,000 was a bequest from a citizen who gave, also, four acres of valuable land for a school site; \$76,000 was allotted by the city council from the general funds of the city; while the school commissioners were obliged to divert the remainder, nearly \$100,000 in the aggregate, from its exceedingly meager maintenance fund, which was never intended to be used for building purposes.

In short, a city, now of 35,000 population or more, with an assessment roll of \$15,500,000, with a school enrollment of 6,104 pupils, and with a school system now in its thirty-fifth year has outstanding in bonded indebtedness for school purposes only \$250,000—now \$273,000, as \$23,000 was assumed when two county school districts were annexed. At first glance this low bonded indebtedness may seem commendable, but in point of fact, when it is recognized that this low record has been obtained at the expense of that proper equipment and that generous maintenance essential to strong internal school work, the situation is but another indication that the citizens of Columbia either have not been informed in a forceful way of school needs or else the old indifference to the importance of good teaching and the conditions essential to good teaching still exists.

### 3. THE INADEQUACY OF THE SCHOOL MAINTENANCE TAX.

The history of local tax levies for school purposes, likewise, affords a criterion for judging of the tangible interest which the citizens of the community take in their schools. When the school system of Columbia was organized, the local rate was fixed at 1 mill on an assessment valuation of \$3,200,000. The rate was raised to 2 mills in 1884 on about the same assessment, and to 2½ mills in 1890 on an assessment of \$3,500,000. During the period the State constitutional

tax had remained constant at 2 mills, which, prorated on the basis of enrollment, yielded Columbia less than \$4,000 annually. In 1895, however, the constitutional convention increased the State tax rate to 3 mills, where it has since remained. This increase of 1 mill by the State was at once offset by the citizens of Columbia, who decreased their city rate, putting it back to 2 mills, despite the fact that the average daily attendance at the schools had risen from 864 to 1,825, whereas the assessment roll had barely reached \$4,250,000. That is to say, during the first 12 years of the life of the public schools of Columbia, whereas the average daily attendance had increased 111 per cent, the amount received for maintenance from State and city taxes had risen from \$8,540.81 in 1883-84 to \$15,895.45 in 1896-97, an increase of 87½ per cent only. Here the local tax rate remained, that is, at 2 mills, for the next 20 years, or until 1916, when it was increased to 5 mills.

This increase in the city tax rate for school maintenance, granted in 1916, was forced on the people's attention for the reason that the adoption of a State-wide prohibition law automatically abolished the dispensary fund, which the Columbia schools had been sharing with other schools of the State and county in steadily increasing amounts since 1900. This fund was derived through a constitutional act, passed in 1895, whereby the net profits of the sale of intoxicants by dispensaries was to accrue to the schools and be distributed among them on a pro rata enrollment basis. Later the State plan was changed to a county system on a local option basis, and so continued until abolished in 1915. In 1912-13 Columbia's share of the county dispensary fund, based on enrollment, was \$17,385.10, which was 35½ per cent of the entire fund. It was urged, however, that inasmuch as most of the intoxicants sold in the county were consumed by the citizens of Columbia, she was entitled to a larger proportion of the returns. This contention was considered reasonable, and thereafter, until the system was abolished, the Columbia schools received 50 per cent of the fund and the schools in the county lying outside the city limits were apportioned the remainder. To meet the deficit brought about through the termination of this arrangement, an increase in city taxes of 3 mills was allowed, thus raising the total city rate for school maintenance to 5 mills.

#### 4. THE WAY COLUMBIA APPORTIONS HER INCOME.

Yet another means of determining how much real interest of the kind that counts the citizens of Columbia are taking in their schools lies along the line of determining how Columbia spends her money, and the proportion of it which she gives to her schools in comparison with what other cities of the country are doing. The basis for coming at Columbia's rank in respect to this matter is to be found in the

tables of statistics compiled by the Census Bureau for 1916 and issued under the caption: "Financial Statistics of Cities Having a Population of over 30,000." Table 13, of this publication, shows that Columbia expended during 1916 \$11.31 per capita of population (the 1915 population estimate of 34,058, made by the Census Bureau, was used) on her municipal activities, and that the amount was distributed among these activities in the following way:

For police protection, \$1.95; for fire protection, \$1.58; for health and sanitation, \$1.02; for the extension and improvement of streets, \$1.99; for charity, \$0.74; for libraries, \$0.02; for parks and playgrounds, \$0.56; and for schools, \$2.29. The remaining \$1.16 of the aggregate amount went for overhead expenses of city administration.

In themselves, these figures mean very little. Not until they are compared and contrasted with the expenditures of other cities for the same purposes do they begin to take on meaning. The table which follows shows how the distributed expenditures of 213 cities look when viewed as an average.

*Distribution of city expenditures.*

Purposes.	Columbia.	Average of 213 cities.
Police department.....	\$1.95	\$2.10
Fire department.....	1.58	1.65
Health and sanitation.....	1.02	1.90
Street department.....	1.99	1.91
Charities.....	.74	1.34
Libraries.....	.02	.24
Parks and playgrounds.....	.56	.67
SCHOOLS.....	2.29	5.77
All other purposes.....	1.16	3.11
Total per capita expenditure.....	11.31	18.69

While this comparison helps us to see where Columbia stands in relation to the actual average expenditure of the 213 cities considered, yet, as her total expenditure is considerably less than the total average expenditure of the list, another table is needed to make her rank in this matter perfectly clear, and that is a table showing the proportion each item bears to the entire expenditure. This table follows:

*Ratio of school expenditure to total expenditures.*

Purposes.	Columbia.	Average of 213 cities.
	<i>Per cent.</i>	<i>Per cent.</i>
Police department.....	17.2	11.2
Fire department.....	14.0	8.8
Health and sanitation.....	9.0	10.2
Street department.....	17.6	10.6
Charities.....	6.5	7.2
Libraries.....	.2	1.3
Parks and playgrounds.....	4.9	3.6
SCHOOLS.....	20.2	30.8
All other purposes.....	10.4	16.3

From this table it is apparent that, as compared with the average of 213 cities, Columbia's chief interest is in the police, fire, and street departments; that her interest in health and charity is somewhat less than the average of the cities listed; and that she is decidedly lukewarm in the financial attention which she devotes to her library and to her schools. Two-tenths only of Columbia's expenditure goes to the schools, whereas of the 213 cities of the country considered in these statistics the average expenditure for public schools is three-tenths of the aggregate. That is, Columbia's proportionate expenditure for the schools would have to be increased 50 per cent to bring her rank up to the average of the cities of the country.

In respect to this matter of the part of the aggregate annual expenditure which goes to the support of the local schools, Columbia stands No. 5 from the bottom of the list of 213 cities. Galveston, Tex., gave but 18 per cent of her money to her schools; Tampa, Fla., 18.9 per cent; San Francisco, 19.9 per cent; Savannah, Ga., 20 per cent; Shreveport, La., 20 per cent; Columbia, S. C., 20.2 per cent. Eliminating Galveston and San Francisco, in view of recent disasters, which have necessitated almost the complete rebuilding of both cities, we find that Tampa, Savannah, and Shreveport alone stand between Columbia and the bottom of the list; furthermore, only the small matter of 1.3 per cent prevents her from having that rank as it is.

#### 5. THE AMOUNT COLUMBIA EXPENDS ON HER SCHOOLS IN COMPARISON WITH CITIES OF THE SAME CLASS.

The foregoing ranking is based on the proportionate expenditure for schools among the several municipal departments of the cities considered. It will be interesting to learn where Columbia stands in relation to other cities in respect to the total amount of money actually expended annually for schools, for of course bills must be paid in money and not in per cents.

Again referring to the Census Bureau's figures, we find that 118 of the 213 cities expended \$5 and above, per capita of population, on school maintenance, 1 of these being in excess of \$10; that 80 expended between \$3 and \$5; that 10 expended between \$2.30 and \$3; and that 5 only spent less than \$2.30. These are: Jacksonville, Fla., \$2.13; Portsmouth, Va., \$2.21; Shreveport, La., \$2.23; Mobile, Ala., \$2.28; and Columbia, \$2.29. So here, again, in terms of amounts actually apportioned to the schools from city income, Columbia ranks No. 5 from the bottom.

The apparent indifference to school needs stands out even more strikingly when considered in conjunction with her rank among the cities with respect to the aggregate municipal expenditure actually made for all purposes. As we have seen, Columbia expended an aggregate from city sources for all activities of \$11.31, but there were

58 cities in the list which expended less than this sum. So, putting these two facts together, we draw this conclusion: In 1916, whereas Columbia stood No. 59 from the bottom in her total city expenditure, she stood No. 5 from the bottom in the proportion of that expenditure which she gave to her schools.

So far we have been considering merely what Columbia has done with her city taxes. It will now be of interest to determine Columbia's rank among the cities of the country in respect to the total annual amount derived from all sources, which was expended by her school department, exclusive of the cost of buildings and sites, per capita of pupils in average daily attendance. The statistical facts necessary to make this comparison are to be found in the report of the United States Commissioner of Education for 1917, the figures therein given being based on returns for the school year 1915-16. Combining the facts taken from several tables in the commissioner's report, we get the following results:

*School maintenance expenditure per pupil in average daily attendance for the cities of the United States, in 1915-16.*

Cities.	Total expenditures (not including buildings and sites).	Pupils in average daily attendance.	Average expenditure per pupil in average daily attendance.
Cities of the United States (all above 5,000 population).....	\$256,941,963	5,762,197	\$44.60
Cities of South Atlantic States (all above 5,000 population)....	12,313,538	418,062	29.45
Cities of South Carolina (all above 5,000 population).....	500,383	30,685	16.31
Cities of South Carolina (all above 25,000 population).....	207,867	9,237	22.50
Columbia.....	83,590	4,029	20.74

From this tabulation it is evident that even if Columbia doubled her annual maintenance expenditure per pupil she would still fall short of the average amount expended by 1,241 city systems of this country by over \$3 per pupil. She would have to increase her expenditure by 42 per cent to reach the average expended by the cities of the South Atlantic States. She is ahead of the average of all of the cities of her own State, large and small, by \$4.43, but when the small places are excluded, and she is compared with the cities of her own population group, i. e., cities having a population of between 25,000 and 100,000, which is the grouping used in the commissioner's report, she is again below the average per pupil, this time by \$1.76.

Again, among the 179 cities in Group II (25,000 to 100,000 population) of the commissioner's report, there were but 2 expending a less annual aggregate for 1915-16 than Columbia. These are Warwick, R. I., whose expenditure was \$4,292 less, and Lewiston, Me., with \$453 less. However, in 1916 these cities had an average daily attendance for the year of but 1,857 and 2,426 pupils, respectively, whereas Columbia's attendance during the same period was

4,029. As regards other cities in her own population class, then, it is obvious that Columbia makes no showing at all. Indeed, her rank, with this same matter of annual expenditure for school maintenance in mind, among the cities of Group III (cities having between 10,000 and 25,000 population) is not flattering. In this group there are 372 cities, of which number 204 expended a larger total on their schools than did Columbia. The average amount which these 372 cities allotted was \$99,047, which is \$15,457 more than Columbia spent, and these comparisons, it must be remembered, are with cities ranging from 10,000 to 25,000 in population.

#### 6. CITIZENS POINT TO A HIGH TAX RATE. IS IT HIGH?

Almost invariably, when effort is made to secure increased maintenance for the schools of Columbia, the general property tax rate is pointed to as a sufficient answer. It will be of interest to look at the facts.

Referring once more to the Census Bureau's figures, this time turning to Table 32, we find that the property owner of Columbia paid for all purposes during 1916 a tax of \$36 on every \$1,000 of assessed valuation. Running over the list of 213 cities again with Columbia's relative place in mind, we find that 177 cities paid less than \$36, while 35 cities, only, paid more. If this alone were taken into account, those who point to the high tax rate as a sufficient justification for not increasing school allowance would have some solid ground on which to stand, but those who make such a reply ignore one essential factor in the matter, and that is the proportion which the assessed valuation bears to the actual value. This same census table shows that the basis used by Columbia in making up her assessment roll was 25 per cent of the actual value. That is, the valuation upon which the property owner actually pays his tax is approximately only 25 per cent of the actual value of the property. "The reported basis of assessment in practice," the compilers of the statistical table state, "is for most cities an estimate, furnished by city officials, of the percentage which the assessed valuation of property forms of its true value." If, then, the taxes were based on actual value instead of assessed valuation, the general property tax rate for Columbia would have been \$8.94 per thousand instead of \$36. Comparing this corrected rate with the rates paid by the other cities on the list, corrected in the same way, we find that every city of the entire list except three has a higher tax rate than Columbia. These exceptions are: Roanoke, Va., \$7.76; Charlotte, N. C., \$7.86; and Easton, Pa., \$8.62. It is clear, then, that the true tax rate (State, county, and city) of Columbia is not high; it is low. Indeed, it is very low, for it comes within three cities of having the lowest tax rate of all the cities of the United States having a population of

30,000 or over. The person, then, who replies to the appeal for more money for the schools by saying that the tax rate is high utters but a half truth which is completely misleading in its effect. Indeed, the tax rate in itself is no criterion whatsoever, though popularly held to be such. It is the rate or basis of assessment in conjunction with the actual tax rate that must be considered in order that a city's rank in respect to taxation shall be properly determined.

The tendency among cities is, unquestionably, to make the assessment valuation tally more and more closely with the true value, thus avoiding the misconceptions which inevitably arise where no such correct basis is used. Of the 213 cities listed by the Census Bureau, 122 report an assessment basis ranging from 75 to 100 per cent of the true value; 48 have a basis ranging between 50 and 75 per cent; 30 report a basis between 30 and 50 per cent; while 13 only report using 25 per cent, or a percentage lower than 25. It is in this last group that Columbia falls. Invariably the cities having a high assessment basis have a relatively low general tax rate; whereas, in general, those having a low assessment percentage must have a correspondingly high general tax rate. It would appear that there are many reasons for concluding that this movement among cities looking toward a closer approximation to the true value when the assessment roll is made up is a commendable one.

#### 7. CITIZENS CLAIM THAT THE CITY IS POOR—IS IT POOR?

One other statement is frequently heard, when the question of school maintenance is raised, namely: "Columbia is a city of poor people and any increase in outlay will work an undue hardship on her property owners." The statement that the South is poor and that southern cities are struggling along against an almost insuperable economic burden has been made so often that the people at home, as well as the country at large, have come to believe it. In consequence, when much needed reforms are denied on the ground that the poverty of the community will not permit the cost, the answer goes unchallenged. Once, again, an examination of the facts will prove illuminating.

The Census Bureau, referring again to the report "Financial Statistics of Cities" (1916), Table 32, gives the true value, estimated by city officials themselves, of the property in 213 cities of 30,000 population or more which is subject to a general property tax. This estimate is given in terms of per capita of population, so that a comparison on exactly the same basis among these cities is easily made. The facts are that Columbia, with a per capita true value of \$1,836, as stated therein, exceeds the average of the 213 cities by \$463; that she exceeds the average of her own group of cities (30,000 to 50,000



population) by \$718 per capita; and that out of the 213 cities listed by the Census Bureau there are only 11 having a higher property value per capita of population. A table showing these facts follows:

*Estimated true property value per capita of population.*

Average of 213 cities.....	\$1, 375
Average of 86 cities (30,000 to 50,000 population).....	1, 118
COLUMBIA.....	1, 836
Pasadena, Cal.....	1, 882
San Diego, Cal.....	3, 106
San Francisco, Cal.....	2, 343
Stockton, Cal.....	2, 195
Shreveport, La.....	2, 053
Boston, Mass.....	2, 075
Brookline, Mass.....	3, 883
Newton, Mass.....	2, 006
Springfield, Mass.....	1, 842
Charlotte, N. C.....	1, 999
Madison, Wis.....	1, 903

It is not true, then, that Columbia is a poor city. She is a rich city. Indeed, judging by the estimated per capita value of taxable property, she is one of the 12 richest cities in the United States. Even though this estimate which is based upon statistics of the Census Bureau collected from city officials themselves should be too large, nevertheless it is clear that Columbia is financially able to do for her schools all that needs to be done.

8. PERHAPS COLUMBIA IS NOT FULLY INFORMED ABOUT THE NEEDS OF HER SCHOOLS.

A community thinks as individuals and feels as individuals, but when it acts it acts in its corporate capacity. Before it acts as a corporate body the individuals constituting it must have thought to such purpose and felt to such purpose that a forceful minority, at least, have come to agreement. Then, and then only, can the community in its corporate and legal capacity be expected to carry into execution the cherished proposal. Furthermore, a community, again in its corporate capacity, never acts until it is compelled to act, especially when it comes to increasing taxes, for its representatives have been told in ways unmistakably plain that increasing taxes is a grievous matter, almost, indeed, as much to be feared as committing the "unpardonable sin." The first and necessary step, then, in any plan contemplating increasing the maintenance income of the schools, or, indeed, of any other group or municipal activity, is to enlist the active interest of individuals, as many in number, and so representative in character, that their demand will irresistibly impel the community, as a corporate body, to take the desired action.

It is a mistake to expect the men who chance at the moment to be the legal representatives of the community to take the desired action upon their own initiative. It is a mistake also to think that an appeal to them alone will suffice. They, as individuals, may be quite in accord with the proposal, but unless they can be shown that the project has won the ear of the community and that the community desires the requested action, they, as the community's trustees and spokesmen, can not, neither should they, commit the community to the plan. A community, therefore, and its representatives also, may appear to be indifferent to a given matter, whereas, in point of fact, those vitally concerned in it have not adopted the methods and taken the steps which are necessary to arouse the community to such interest that action will follow automatically and of necessity.

Responsibility for the initiative in matters pertaining to the schools ought, of course, to rest with the board of education, the superintendent of schools, the principals, and the teachers. They know most about the kind of service which the schools are giving to the community; they are the ones who know most about the present and the future needs; in fact the community expects these officers and teachers to take the lead in informing it of the schools' work, of their needs, and to suggest concrete plans for meeting these needs.

It is not sufficient, therefore, if nothing more be done than for the board of education formally to request of the tax levying body an advance in rate. Those responsible must first present their case to the people who make up the community. When the people are convinced of the need and are willing individually to be taxed to meet it, there will be no objection made when the matter is put up to the officials who fix the rate. The community in its corporate capacity will have spoken and action will inevitably follow.

The established method of winning the active attention of a community is that of publicity, and no opportunity for informing the people about their schools—their aims, their work, their cost, their problems—should ever be let go by. Through the columns of the local press, through bulletins issued on special phases of school work, through talks before civic bodies on matters pertaining to education, through exhibits of pupils' work which will arouse the collective interest and pride of the parents, through the medium of the parent-teachers' associations, and in many other ways easily discoverable, there can be kept up a constant process of dissemination of news about the schools. Furthermore, it must not be overlooked that the parents of the children who are in school are the people who make up the community group and who determine what tax levying bodies shall do. It ought not to be a difficult matter to convince the parents of the educational needs of their own children, nor of the value of what the schools are doing, nor of the necessity for concerted action to

secure relief. Doubtless it was this fact which the mayor and aldermen of Columbia, who constituted the "board of visitors" of 1893, had in mind when they said, speaking of the school situation of that year:

Money is needed for the support of our public schools, and this can only be obtained by general taxation. Every increase of taxation is looked upon with suspicion by the citizens, but this can be overcome by fostering a greater, wider, and deeper interest in the public schools, by bringing the citizens and the patrons into close contact with the schools.

In discussing the responsibility of boards of education in this matter of exercising leadership in securing funds for school maintenance, Chancellor<sup>1</sup> makes a comment that is worth repeating. He says:

If boards of education would spend half their time in work to get funds, they would do better for education than they now do. They prefer the easier labor of trying to reduce expenditures after others have given them what money they choose. It is symptomatic of incompetence for a board to worry and to wrangle over petty sums rather than to go out and raise sufficient means to carry on public education creditably. The work of educating public sentiment to reasonable school appropriations should be carried on all through the year by boards of education.

Until such methods of publicity, then, have been systematically and continuously employed, extending over a considerable period of time, and until definite programs calling for action have been presented to the community and rejected by it, can it properly be concluded that Columbia is indifferent to education and is neglectful of her schools deliberately.

#### SUMMARY.

1. The public school system of Columbia was organized in 1883 only after a hard struggle to overcome those who protested against "taxing one man's property to educate another man's child."

2. For 15 years after the organization of the system no provision was made for the erection of school buildings. No adequate building program was undertaken until 1905. The bonded indebtedness for buildings for school purposes now reaches but \$273,000.

3. Tax levies for school maintenance have been begrudgingly allowed.

4. Of the 213 cities of the United States having a population of 30,000 or more, Columbia stands third from the bottom in the proportion of the total annual expenditure of the city which goes to the support of the schools. Her proportionate school expenditure would have to be increased one-half to bring her up to the average of the cities of this country.

5. In 1916 Columbia expended \$11.31 per capita of population for

<sup>1</sup> Chancellor, W. E. Our Schools, Their Administration and Supervision. Heath & Co., 1909, p. 340.

all purposes, \$2.29 of this amount going to the schools. Among 213 cities this expenditure placed her No. 59 from the bottom in the total amount for all purposes, per capita of population; and No. 5 from the bottom in the proportion of this amount which went to the schools.

6. If Columbia *doubled* her school maintenance and then added to this \$3 per pupil, she would just reach the average per pupil in average daily attendance expended by 1,233 cities of the United States having a population of 5,000 or more. She will have to increase her expenditure by 42 per cent to reach the average expended per pupil in average daily attendance by the cities of the South Atlantic States having a population of 5,000 or more.

7. The true general tax rate of Columbia for all purposes is very low; excepting three it has the lowest true rate of the cities of the United States which have a population of 30,000 or over.

8. Columbia is one of the 12 richest cities of the United States, having an estimated property value of \$1,836 per capita of population.

9. The school commissioners should take the initiative in informing the public in forceful ways of the needs of the schools and of the service they are rendering in order that adequate maintenance may be secured.

### III.—INSUFFICIENT MAINTENANCE MEANS MEAGER SALARIES FOR SCHOOL EMPLOYEES.

#### 1. SALARIES AND THE RISE IN LIVING COST.

The schools of Columbia organized in 1883 with a pay roll comprising a superintendent at \$1,500; 1 principal at \$900; 2 principals at \$675 each; 1 teacher at \$450; 5 teachers at \$360 each; and 10 teachers at \$270 each. Except for the salary of one teacher, the maximum salary of teachers remained at \$360 for 19 years, or until 1902, when it was raised to \$405. Three years later, the maximum was increased to \$450; in 1907, to \$495; and in 1910, to \$540. In 1911 a 10 per cent increase was granted, which raised the maximum to \$594 for regular grade teachers; to \$643.50 for first-grade teachers; and to \$893 for high-school teachers. During this year, too, the commendable plan was adopted, which has since remained in effect, of paying the teachers in 12 equal installments. Since 1911 the salary schedule has again been revised. Through this revision the high-school teachers received an advance of about 7 per cent and the white teachers of elementary grade about 6 per cent.

#### THE SALARY SCHEDULE EXPRESSED AS A DAILY WAGE TABLE.

The salary schedule as it now stands follows. It is expressed as a daily wage table, as well as an annual aggregate, in order that it may be seen just how low the salaries really are in comparison with other forms of service which are paid for by the day on the basis of 313 working days in the year. While the teacher is actually on duty in the schoolroom but 200 days in the year, this is not by any means the measure of the time she is engaged in school work; furthermore, her duties are such that, with few exceptions, the annual salary which she receives from her school employment comprises the whole of her income, out of which she must live the entire 365 days of the year. It is, therefore, fair, for purpose of comparison, to show what her annual salary amounts to when distributed among the 313 working days of a year.

It may be objected, too, that the teacher's daily program of work is not so long as that of workers in other lines, and that therefore such a comparison as this is not fair. It is true that in most systems the teacher does not go on duty until 8.30 a. m., and that she can leave her school when the children are dismissed at 4 p. m. (in Columbia 2.30 p. m., owing to the employment of the single-session

plan); yet in practice, in many instances, her work keeps her from half an hour to an hour longer. Furthermore, at all times she is subject to call, by superintendent, supervisor, or principals to attend meetings and conference on school matters. Moreover, the fact should not be overlooked that with most workers, when quitting time comes at the close of the day, the work is dismissed from mind until the next day, whereas with the conscientious teacher, as with the housewife, her work truly is never done.

*Wage schedule of school corps, Columbia, 1918.*

Superintendents and teachers.	Per year.	Per working day.
Superintendent.....	\$2,500.00	\$8.00
Supervisor of elementary schools.....	1,200.00	3.83
Supervisor of music.....	900.00	2.87
ELEMENTARY SCHOOLS.		
Principals:		
3 at (each).....	1,300.00	4.15
2 at.....	1,000.00	3.19
1 at.....	900.00	2.87
1 at.....	693.00	2.21
1 (colored) at.....	650.00	2.07
Teachers:		
White—		
Minimum.....	500.00	1.59
Maximum.....	643.50	2.05
Colored.....	300.00	.95
HIGH SCHOOLS.		
Principals:		
1 (white) at.....	1,600.00	5.11
1 (colored) at.....	900.00	2.87
Teachers:		
White men—		
Minimum.....	900.00	2.87
Maximum.....	1,080.00	3.45
White women—		
Minimum.....	693.00	2.21
Maximum.....	742.50	2.37
Colored.....	396.00	1.26
Special teachers:		
1 manual-training man.....	600.00	1.92
1 domestic-science woman.....	540.00	1.72

THE SALARY SCHEDULE IN COMPARISON WITH THE WAGE SCALES OF OTHER EMPLOYEES.

It will prove of interest to compare the forgoing schedule for the school corps with the schedule in force among the employees of Columbia's municipal organization; with that adopted by her trades' union; and with that applying to the motormen and conductors of her street railway system.

*Wage schedule of city employees, Columbia, 1918.*

Employees.	Per year.	Per working day.
Chief of fire department.....	\$2,000	\$6.39
Chief engineer of fire department.....	1,500	4.79
Assistant engineer of fire department.....	1,056	3.37
Firemen.....	990	3.16
Chief of police department.....	1,800	5.75
Captain of police department.....	1,320	4.21
Clerk of police department.....	1,320	4.21

*Wage schedule of city employees, Columbia, 1918—Continued.*

Employees.	Per year.	Per working day.
Detective, police department.....	\$1,188	\$3.80
Patrolmen, police department.....	990	3.16
Engineer-superintendent of waterworks.....	2,007	6.41
Chief engineer of waterworks.....	1,950	6.23
Engineer, waterworks.....	1,323	4.22
Clerk, waterworks.....	1,680	5.36
Fireman, waterworks.....	1,421	4.54
Stenographer.....	897	2.86
Readers for meters, waterworks.....	1,000	3.19
Helpers, waterworks.....	547	1.75
Head of garbage department.....	924	2.95
Drivers, garbage department.....	714	2.28
Playground supervisor.....	1,200	3.83
Assistant superintendent, trees and parks.....	1,500	4.79
Foreman.....	936	3.00
Driver.....	624	2.00
Laborers.....	468	1.50
Foreman of streets.....	1,200	3.83
Assistants.....	702	2.24
Laborers.....	468	1.50
City clerk and treasurer.....	2,400	7.66
Assistant clerk and treasurer.....	1,500	4.79
Stenographer.....	900	2.87

*Wage schedule of trades-union, Columbia, 1918.*

	Approximate amount per day.		Approximate amount per day.
Plumbers.....	\$6.00	Musicians.....	4.00
Granite lenthers.....	4.50	Barbers.....	3.50
Printers.....	4.50	Railway learners.....	3.50
Machinists.....	4.00	Pressmen.....	3.50
Bricklayers.....	4.00	Painters.....	3.50
Carpenters.....	4.00	Sheet-metal workers.....	3.50
Electricians.....	4.00	Theatrical workers.....	3.00
Brickmakers.....	4.00	Railway clerks.....	3.00

*Wage schedule of motormen and conductors, Columbia, 1918.*

	Per working day.
Under 6 months.....	\$2.00
Six to 12 months.....	2.25
Above 12 months.....	3.00

All time above 10 hours per day carries one and one-half times regular rate.

It will prove instructive to make some comparisons based on the foregoing schedules. The white teachers of the elementary schools, it will be observed, get from \$1.59 to \$2.05 per day; if the women teachers in the high school be included the maximum reaches \$2.37 per day. From \$1.59 to \$2.37 per day, then, marks the range of all salaries paid to the white women teachers of the system. Turning to the other schedules we find that the drivers of the garbage wagons, the laborers on the streets, in the parks, and waterworks, the "assistants" in the street department, and motormen and conductors who have served less than a year are the only workers among all these people whose daily wage falls below the maximum given to the best-paid woman teacher in the department. The stenographers in the employ of the city are getting, according to the schedule, 50 cents

a day more than the best-paid high-school woman and 82 cents per day more than the best-paid teacher in the grades.

The men teachers of the high school are getting from \$2.87 to \$3.45 per day. This higher rate places them in the financial class comprising the stenographers of the municipal departments, the firemen, policemen, meter readers, motormen, and conductors who have been a year in the service, barbers, railway learners, pressmen, painters, sheet-metal workers, theatrical workers, and railway clerks. While in the group made up of bricklayers, brickmakers, carpenters, electricians, and musicians are to be found the principals of the largest elementary schools of the city, who are getting \$4.15 each per day.

It is not to be understood that the survey committee feels that the salaries of these workers are too high, indeed it wonders that the city can secure the service of capable men to head its various departments at the salaries which are paid. The committee's purpose is merely that of showing how inadequate the salary schedule of the school corps is in comparison with the wages paid workers in other lines, many of them requiring no such preliminary outlay for their preparation as that demanded of the school staff.

#### TEACHERS' INCOMES COMPARED WITH FIXED EXPENSES.

Another way of grasping the inadequacy of teachers' salaries is that of comparing their income with the fixed living expenses, for no one, surely, would argue that a teacher who gives her entire time to school work should not receive as compensation a wage that will support her in reasonable comfort and with a margin for emergencies.

There are 90 white teachers in the schools of Columbia; 39 of these report that they pay for their room and board, inclusive of fuel and laundry, an amount ranging from \$27 per month to \$45. The average expenditure for these items is \$34. In addition, some 30 of the teachers pay car fare in going to and from their schools, which means an additional outlay of at least \$2 per month. The average fixed expense for the teaching corps, then, ranges from \$34 to \$36 per month. The average aggregate fixed expense for the teaching year of 9 months, therefore, falls between \$306 and \$324, or about \$315.

Summarizing the foregoing and comparing with the fixed income, the following is the result:



*Income and expenses of teachers.*

	Elementary white women.		High-school white women.	
	Minimum.	Maximum.	Minimum.	Maximum.
Income for the year.....	\$500.00	\$643.50	\$693.00	\$742.50
Fixed expense for 9 months.....	315.00	315.00	315.00	315.00
Balance remaining.....	185.00	328.50	378.00	427.50

Out of this balance, ranging from a minimum of \$185 to a maximum of \$427.50 among high-school women, the teacher must live for the remaining three months of the year; must provide her clothing for the entire year; must pay for her books, magazines, papers, lectures, and her summer school, if she attends; must provide for charity, for recreation, for life insurance, for doctor's bills, and for those dependent upon her, and many teachers are helping to support others; and must make her provision for the coming of the inevitable "rainy day." The magnitude of the problem confronting the teacher of Columbia can be appreciated to some extent when a study is made of the outlay she must make for clothing alone.

## THE COST OF BEING WELL DRESSED.

To get at this is not a simple matter, for such a study involves setting up a minimum clothing standard for a group of women the members of which vary greatly in taste, in knowledge of materials and of styles, in purchasing ability, in capacity to mend garments and to "make over" old garments, and in ability to prevent the general wear and tear to which clothing is subject. As compared, however, with the women workers in other lines of work the standard required of the teacher in order that she may present that "smart" appearance which children appreciate and which her own self-respect demands it must be recognized is comparatively high, quite as high, indeed, as that expected of saleswomen, clerks, and stenographers. A study of the cost of being well dressed was recently made by the United States Bureau of Labor Statistics, the results of which study will provide a basis, at least, for conclusions regarding the cost which teachers are put to in clothing themselves.

This study was made of the clothing expenditures of 53 women workers of Washington, D. C., for the year 1916, and was based on the prices which prevailed during the later part of 1916 and the early part of 1917. All of the women were living away from home; and most of them were boarding in working girls' homes, in private families, and in boarding houses, although a few rented rooms and did their own food purchasing and cooking. All were between the

ages of 19 and 35 years and were self-supporting; 17 were employed in Government work, 13 in business offices, and 5 in telephone offices. The table which follows shows the average amounts expended by these women for "outside clothing" and also for the separate items of dress which are commonly worn by women and of which, as a rule, it is necessary to purchase a supply each year.

*Average yearly expenditure for items of clothing, by income groups.*

Annual income.	Number of women.	Outside clothing (suits, coats, sweaters, dresses, waists, dress skirts).	Other articles of dress.							All clothing.
			Hats.	Shoes.	Gloves.	Stockings.	Corsets.	Underwear.	Miscellaneous.	
Under \$300.....	4	\$19.78	\$5.19	\$7.59	\$0.77	\$2.74	\$2.25	\$3.13	\$2.99	\$44.42
\$300 and under \$400.	5	32.63	4.45	7.10	1.23	3.42	1.91	4.62	8.80	64.15
\$400 and under \$500.	9	45.80	9.33	12.06	3.19	6.02	2.48	7.11	10.79	96.77
\$500 and under \$550.	8	47.50	10.31	13.50	2.88	5.83	4.13	5.22	9.99	99.35
\$550 and under \$600.	5	72.48	13.80	16.69	4.46	6.20	2.30	7.05	19.21	142.19
\$600 and under \$700.	7	57.55	12.71	14.29	2.62	3.88	2.93	6.37	7.42	107.77
\$700 and under \$800.	7	66.78	13.47	16.71	5.32	6.89	3.79	11.39	16.82	141.17
\$800 and under \$1,100	8	99.34	19.06	21.25	6.00	7.25	6.06	9.94	32.23	201.13
All groups.....	53	57.58	11.59	14.20	3.32	5.53	3.41	7.18	14.27	117.49

An examination of the distribution shown in this tabulation must convince anyone who is at all familiar with the requirements and cost of women's apparel that, except possibly for the group which expended the maximum average, these women dressed on amounts which would by no means meet the standard which public opinion demands of teachers. For, as a class, teachers are expected to identify themselves with the activities (social, civic, and religious) of the community to a much greater degree than the class of workers upon whom the foregoing study was based. It can not be doubted that the maximum average expenditure, \$201.13, is none too much for the teaching class; indeed, considering the advance in prices during the year 1917 (the study was based on 1916 conditions), it would seem that a yearly allowance for clothing ranging from \$150 to \$200 could not properly be considered extravagant. Recalling the fact that Columbia teachers, after paying for board, room, laundry, and carfare, have left an amount falling between the limits of \$185 and \$427.50, out of which they must not only provide their yearly allowance of clothing but their living expenses for the remaining three months as well, the fact must stand out very clearly that the teacher of Columbia is facing an impossible situation, and it is obvious, too, that with a salary margin so narrow the Columbia schools can offer no career which can possibly prove attractive to an ambitious and capable woman. A precarious existence can be eked out, it is true, if

the teacher is blessed with a generous measure of good health, but with such a limited balance as the figures disclose it is certain that there can be no adequate and systematically pursued plan of self-improvement which professional standards properly demand in increasing degree and which is contingent on a sufficient margin of income and of time.

THE IMPERMANENCY OF THE TEACHING SERVICE.

Confronted with such a problem, it is to be expected that there will have been many teachers who will have entered the public-school service intending to remain but a short time, two or three years at most, and determined to drop out at the first opportunity. An examination of Columbia's records with length of service in mind discloses the fact that since the schools were organized in 1883 there have been 335 teachers employed; 248 of whom dropped out during the first five years of their service, 210 during the first four years, 172 during the first three years, and 124 continued no longer than two years, of which number, 63 left after having been in the department but one year. Putting this situation another way, it is correct to say that there were as many teachers who remained three years and less as there were those who remained longer than three years. That is, in the language of the statisticians, three years is the median or middle point of service. A table showing these facts in detail follows:

Period of teaching service, Columbia, 1918.

	Years.														
	1	2	3	4	5	6	7	8	10	11	12	13	14	16	
White teachers.....	52	38	34	32	26	9	7	6	4	4	2	3	4	3	2
Negro teachers.....	11	23	14	6	12	6	1	1	1	3	4	5	1	1	2
Total.....	63	61	48	38	38	15	8	7	5	7	6	8	5	4	4

	Years.										Total.
	18	20	21	22	23	26	27	28	29	35	
White teachers.....	4	1	1	3	1	1	1	0	1	1	240
Negro teachers.....	3	0	0	0	0	0	0	1	0	0	95
Total.....	7	1	1	3	1	1	1	1	1	1	335

Such impermanency in the teaching corps as these facts disclose must seriously handicap the superintendent and his supervisors in working out a unified, consistent, and well coordinated educational policy. Furthermore, it is clear that teachers who enter the department to leave it at the first opportunity are not going to give to their work that unremitting application necessary to secure the best

results. Even under the most favorable conditions there will always be many transients among teachers, but good instructional opportunity for the children requires that serious effort be made to stabilize the teaching force. Offering good salaries is one way which will help in accomplishing this object.

This instability in the teaching corps is in striking contrast to the situation which prevailed among the elementary schools of Prussia prior to the outbreak of the war. In these schools, which are remarkable for producing the kind of efficiency which Germany demands, recent studies show that 45 per cent of the male teachers of the cities had been in service for more than 20 years and only 6.69 per cent had had less than 6 years' service, while 77.67 per cent had served more than 10 years.<sup>1</sup> Conditions of salary, of tenure, of retirement provisions are such that teaching in Germany has become a profession wherein those who enter do so intending to remain in the work for life. The German elementary-school teacher does not receive a large salary, but it is sufficient to provide him with a comfortable home, an education for his children, a margin of savings, and a pension upon retirement which will keep him from want for the rest of his days. If teaching is ever to become a profession in America, it will be only after some such provisions are made to secure greater permanency in our teaching force.

#### CONDITIONS ESSENTIAL TO SUCCESSFUL TEACHING.

Good business practice outside of the teaching profession is recognizing this need, for it is learning that success within the field of business enterprise is largely dependent upon offering to employees inducements such that long tenure and the taking of a vital interest in the business will inevitably ensue. If it be true that a happy, contented, and care-free employee is requisite for success within the domain of business, how much more must a serene mind be essential to work of a superior quality in the business of teaching. Good teaching, perhaps more than good work in any other activity, is dependent upon a buoyant, hopeful, joyous mind; for good teaching is a matter primarily of the spirit. A state of mind is contagious. Happy teachers mean happy children, and unhappiness in a teacher inevitably begets unhappiness among children. Men and women, as well as children, can never do their best work when they are dispirited, discouraged, and depressed. True, some teachers are able, however adverse the conditions, to live in the realm of the free spirit, but with most the response to material conditions is powerful and immediate. In the interest of the children, therefore, school officials should give much practical consideration to the ways and means of improving the material conditions which press in upon the life of their teachers.

<sup>1</sup> Alexander: *The Prussian Elementary Schools*, Macmillan, 1918, p. 197.

The qualifications required of teachers are constantly rising. There was a time when young people who could do nothing else or who wished to gain a few dollars to enable them to attend a business college or a medical or law school turned to teaching with no intention of remaining in the work longer than a year or two at most; but those days have gone by never to return. It is now generally recognized that qualities of character and intelligence, as well as careful training, are essential; and, more and more, officials who are responsible to the people for the administration of their schools are raising the required standard of qualifications. The teacher should be and in most cases is the equal of the men and women who enter other branches of professional life; and yet she, all too frequently, receives a recompense which is less than the wages of those who are doing the most menial and unskilled labor of the community.

Again, as standards of teacher qualifications are raised an increasingly larger technical preparation is demanded. The best teachers in the grades are well grounded in the chief departments of human knowledge; they know what the big things are which are being accomplished in the broad fields of the world's work; they have developed well-defined standards of taste and appreciation in music, art, and literature, and know the best contributions which these arts have produced; they keep abreast of political thought and discussion in their own community, and in the larger community which lies beyond; and, moreover, within the field of education, they are students of the general and special method of education, and keep in touch with the progress of pedagogical investigation and discussion, working over continually into schoolroom practice the established results of such experiment and observation. Years of preparation are required, in the high school, in the college or university, and in the professional course, followed up by vacations spent in summer schools, by Saturdays and holidays spent at lectures and teachers' meetings, by evenings occupied in intensive and detailed preparation for the classroom work of the following day. Besides time, effort, and strength of body and of purpose, the expenditure of considerable money is necessary in securing such preparation. It is no act of justice to those who have gone through with such a laborious and expensive course of training as is now required that they should, in the end, find themselves limited to a salary so small as to seem pitiful.

Furthermore, a teacher should purchase many books, she should attend conventions and conferences, and she should travel. Her growth can not be maintained unless she reads daily; unless she comes in personal contact with people outside her own community and who afford a corrective against the provincialism of localities; and unless she broadens her horizon through travel. But these

things can not be accomplished without money. A teacher should be so situated financially that she can spend a fifth of her salary, at least, in such effort at self-improvement and in the acquisition of self-culture.

In short, a salary should be paid sufficient to enable teachers to live in reasonable comfort and still have left a margin adequate to permit them to take advantage of the various opportunities for personal growth offered by their own and other communities; and with a margin, too, generous enough to make it possible for them to command that respect and recognition in the community to which the dignity and worth of their profession entitles them. In addition, a teacher who has proved her worth in actual practice should be placed completely at ease with respect to tenure. Provisions should also be made, again with the welfare of the children in mind, for a retirement fund which will enable an allowance to be made to the one who has faithfully served her community during the active and virile period of her life span and which will make it easy for her to be withdrawn from the classroom when her usefulness has ended.

#### COLUMBIA'S EXPENDITURES FOR TEACHERS' SALARIES.

Columbia, then, it must be pointed out, has still far to go in improving the material conditions of her teachers in respect to salaries and to retirement allowances before she can command the uninterrupted services of teachers of the highest training and ability; before she can expect to hold them up to the highest standards of teaching skill; and before she can properly insist upon evidence of a greater progress in self-culture than is now to be observed in the rank and file of the school corps. Indeed, in both salary schedule and in provision for a retirement allowance others cities and other sections of this country have far outstripped Columbia, as the facts seen in comparison will disclose.

To illustrate: During the academic year 1915-16 Columbia expended a total of \$70,419 in salaries of principals, supervisors, and teachers (superintendent's salary not included). As there were 4,029 pupils in average daily attendance for the year, this expenditure amounted to \$17.48 per child. During the same period the average per pupil, reckoned on precisely the same basis, for the 165 cities listed by the Commissioner of Education as being in Columbia's population group, was \$30.82. Of the 165 cities, 117 expended from \$25 to \$65 per pupil in average daily attendance; 40 expended from \$18 to \$25; while 8 only fall into the last group—that is, the group expending less than \$18 per child. These eight cities follow: Columbia, \$17.48; Savannah, Ga., \$16.96; Portsmouth, Va., \$16.84; Montgomery, Ala., \$16.69; Shreveport, La., \$16.31; Joplin, Mo., \$15.80; Macon, Ga., \$15.51; and Charlotte, N. C., \$15.39.

Summarizing, we find that 138 out of the 165 cities of Columbia's class expended on teachers' salaries one and one-half times as much as she did; while 36 out of the 138 expended twice as much or more.

Whatever may have been true in the past in regard to the purchasing power of a dollar, it is an established fact that now, as among different sections of the country, the dollar is stabilized; and its value, with slight local variations, is the same the country over. Only one explanation then can be offered to account for the great difference between the salaries paid the teachers of Columbia and those paid generally throughout the country, and that is that the citizens of Columbia do not yet realize how necessary it is in securing results of the first order in the schoolroom to have teachers at ease in respect to the financial side of living.

When the amount which the teacher must invest in her training is taken into account, and when the greatly lessened purchasing power of a dollar is considered, it is not too much to expect of Columbia or of any other American city to pay to elementary grade teachers a beginning salary of \$600, which shall increase regularly to at least \$1,280, and a beginning salary in the high school of not less than \$800, increasing to \$1,500 or more. The salary of principals, superintendent, janitors, and other members of the school corps should be increased in proportion. Surely there can be no justice in the pittance which Columbia pays her colored teachers, for the most ignorant members of their race can earn in the cotton fields considerably more per day than the colored teachers of Columbia are receiving. Indeed, inquiry discloses the fact that it is impossible for these teachers to live on the salary which they are now receiving from the school department, and that, in order to become self-supporting, it is necessary for those without other income to do sewing or whatever work comes to hand.

#### THE RISE IN THE COST OF LIVING.

This serious inadequacy is particularly striking when the facts regarding the rise in the cost of living are taken into account. Studies made by the United States Bureau of Labor Statistics show that food prices throughout the United States have risen each year since 1907, except during 1911 and 1915; that food as a whole was 52 per cent higher in December, 1917, than in December, 1913; and that, as compared with 1907, prices had increased 78 per cent.

In practically all of the industries wages have increased in response to this rise in the cost of living; thus, organized labor is now found to be receiving more than in any preceding year. In all trades taken collectively, the United States Bureau of Labor Statistics points out,<sup>1</sup> the increase in hourly wage rates in 1916 over

<sup>1</sup> U. S. Bureau of Labor Statistics: Bulletin No. 214.

1915 was 4 per cent; over 1914, 5 per cent; over 1910, 14 per cent; and over 1907, 19 per cent. Although the wage rate has steadily increased it has not kept pace with the increase in food prices, consequently the purchasing power of an hour of labor has correspondingly declined. These facts are brought out in the following table, made up from tables published by the United States Bureau of Labor Statistics:<sup>1</sup>

*Food purchasing power of wages diminishing.*

Years.	Wage rate per hour.	Food prices.	Food purchasing power of wages.
1907.....	100	100	100
1908.....	101	103	99
1909.....	102	108	95
1910.....	105	113	93
1911.....	107	112	95
1912.....	109	119	91
1913.....	111	122	91
1914.....	114	125	91
1915.....	115	124	92
1916.....	119	139	86
1917.....		178	

This table shows both wage increase and food-cost increase, in comparison with what wages and food prices were in 1907. By comparing the increase in wage rate from year to year with the more rapid advance in food prices, the facts about the steadily diminishing value of wages are seen. Thus it appears that from 1907 to 1912 the value fell off about 9 per cent; that the advance of wages during 1912, 1913, and 1914 kept even pace with the advance in prices; but that since 1914 there has again been a rapid decline, resulting in a net loss for the entire period of 14 per cent. If wages increased no more rapidly in 1917 than during 1916 (the facts are not yet obtainable), then the net loss for the period will have grown to 69 per cent, giving a total loss of 31 per cent since 1907. It is clear from this statement that the country will be compelled to make radical readjustments of wage schedules if workers are to remain self-supporting; it must be clear also that in no branch of endeavor is there greater need for immediate revision of schedules of compensation than among the teachers. Already many parts of the country are reporting inability to secure teachers at all, and unless boards of education respond promptly to the economic demands of the time we shall see a teacher "famine"; for, with conditions which now obtain, teachers who receive no more than do the teachers of Columbia can not possibly remain self-supporting.

COLUMBIA'S SALARY SCHEDULE RECOGNIZES EXPERIENCE, BUT NOT MERIT.

The salary schedule for Columbia teachers now in force recognizes only the factor of length of service in determining compensation.

<sup>1</sup> U. S. Bureau of Labor Statistics: Bulletin No. 214.



That is, a teacher in the grades begins at the minimum of \$500 per year; her yearly salary automatically increases until the fourth year, when the maximum of \$643.50 per year is reached, which then becomes the amount she receives annually for the remainder of her employment. This method of fixing salaries is the one, though with many differences in detail, which is in operation in most of the cities of this country. However, it is generally recognized that such an arrangement has serious defects.

In the first place, everyone knows that some teachers are worth very much more to a department than are others, and that this worth is not dependent on length of service. In the second place, such a plan offers no inducement for special industry or effort for self-improvement, for the teacher who does just enough to escape dismissal gets quite as much as the teacher whose heart is in her work. And, again, there is a strong tendency among teachers, as among all workers on salary, when middle age is reached and the maximum salary is attained, to permit the desire for a comfortable, easy-going life berth to outweigh the ambition for a steadily increasing personal efficiency which entails hard work and many denials of personal pleasure. A salary schedule having a maximum which is reached early in the service and beyond which no individual can advance operates powerfully to inhibit growth.

However, with an adequate salary, with high standards of professional qualifications for entering teachers, and with good supervision, the experience of many systems shows that even under such a salary plan a large part of the teaching corps in a given department can be developed into good teachers and maintained as such for a number of years. But whether or not any considerable percentage of such a group come to be properly called excellent teachers will depend in large measure upon the special inducements which the system offers through the medium of its administrative methods and its salary schedule. It ought, therefore, to be possible to devise a plan which will permit of an increase in salary, beyond a maximum representing a living wage common to all, for those teachers who show evidence of increasing scholarship and of professional preparation and whose demonstrated efficiency and general worth are high.

#### PLANS FOR RECOGNIZING MERIT.

The success of any plan based on the personal efficiency of the teacher must of necessity turn upon the method employed for determining the degree of that efficiency. Just here lies the difficulty, for the responsibility of passing judgment upon the teachers of a department must rest upon the superintendent and his staff of supervisors. The teacher who is graded low compares herself with some other teacher in the department more fortunate and then concludes that

she has been unfairly and unjustly marked. In some places the dissension in the corps, in consequence of alleged unfairness in evaluating the efficiency of the teachers, has been so great as to outweigh the benefits. Indeed, it is doubtless the fear of engendering such discord that has deterred many school authorities in adopting a plan to recognize individual merit in terms of the salary schedule.

To avoid, as far as possible, this danger of unfairness and to provide a check against error of judgment, most plans of this type use a form for scoring efficiency besides requiring that each teacher shall be graded by more than one person. In Decatur, Ill., for example, the grade of each teacher is a composite made up by the superintendent from the markings of three persons who consider the following factors:

- |                                |                            |
|--------------------------------|----------------------------|
| 1. Physical aspect of school.  | 6. Attitude toward pupil.  |
| 2. Teacher's personality.      | 7. Discipline and control. |
| 3. Adaptability.               | 8. Professional interests. |
| 4. Loyalty to school policies. | 9. Teaching skill.         |
| 5. Spirit of cooperation.      | 10. General impression.    |

The Savannah, Ga., plan is as follows:

1. A probationary period of one year, with indefinite tenure thereafter.

2. A beginning salary of \$495, increasing automatically \$45 per year for five years.

3. At the end of the five-year period the teacher may remain indefinitely at the attained salary level or she may apply for promotion to the next salary group. (This application may be made at the end of the fourth year of service, if desired.)

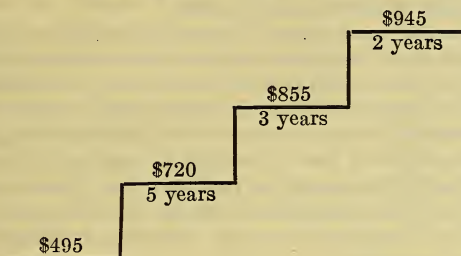
4. The applicant for promotion is rated by three persons three times during the year following the announcement of her candidacy. This rating is based on the following efficiency factors: (*a*) Scholarship; (*b*) methods of teaching; (*c*) management of pupils; (*d*) attention to the details of school business; (*e*) personality; (*f*) professional interest and growth; (*g*) spirit of loyalty and cooperation; (*h*) interest in and sympathy with children.

In addition, she is expected to pursue during the year some academic study relating somewhat generally to the subject matter of her teaching; also to read two modern educational books from an approved list and defend before a group of examiners a paper which she prepares on some theme suggested by her reading.

5. If successful, she passes into the second salary division, which begins with \$720 and increases automatically \$45 each year for a period of three years. This brings her to \$855, where she can again rest, or, in turn, become a candidate, as before, for entrance to the third salary group, which likewise increases automatically \$45 per year, this time for two years.

6. This last step, which can be reached in a minimum of 11 years from the beginning, marks the final maximum which is possible for her to receive under the provisions of the plan. Here she remains—that is, at \$945—for the remainder of her teaching period.

The steps in this plan are shown in the following diagram:



As a department should be able to attract able teachers from the outside who would be unwilling to enter at the beginner's rate, provision is made for extending certain credit to such. A normal graduate of an accepted school, for instance, can be started with three years' credit, and a graduate of a class "A" college may be given four years' credit in terms of the salary schedule.

The teachers of colored schools are eligible to the same promotions; but, in recognition of an assumed difference in cost of living and in the expense of training, as compared with the white teachers, their salary has been set at all points at 75 per cent of that of the white teachers. It is pertinent to ask, in this connection, however, whether the living cost of negro teachers is actually less, or, if less, should it be less than that of white teachers? The same question should likewise be raised respecting the cost of the training required of negro teachers. Again, if the facts should show that there is no appreciable difference in either the cost of living or the cost of training as between white and negro teachers, should not both groups work under the same salary schedule?

A PLAN SUGGESTED FOR COLUMBIA.

The following plan, based upon that suggested by Cubberley,<sup>1</sup> is recommended as a possibility for Columbia:

*Tentative salary schedule for the elementary teachers of Columbia.*

Teachers.	Term of appointment.	Beginning salary.	Yearly salary increase.	Years to reach the group maximum.	Maximum salary for the group.
One-year teachers (probationary).....	1 year.....	\$600	\$50	3	\$750
Three-year teachers.....	3 years.....	750	50	3	900
Five-year teachers.....	5 years.....	900	40	5	1,100
Permanent teachers.....	Until retired.....	1,100	30	6	1,280

<sup>1</sup> Cubberley: Public School Administration, p. 261.

When the maximum of each group is reached, the following alternative courses should be open to the board of education:

1. Termination of the contract (permissible each year in group No. 1).
2. Reappointment annually at the group maximum.
3. Promotion to the next higher group.

The promotion from group to group beyond that of the three-year teachers should be granted only to those who have shown special merit and have given evidence of valuable professional study. To satisfy the latter condition the board might require the candidate for promotion to spend a year in study at some recognized college or university, or a year in teaching in some good school system in another part of the country, or perhaps a year in study and travel combined. In this connection a system of exchanging teachers might easily be established between Columbia and other cities to their mutual advantage.

A schedule similar to this could easily be arranged for the teachers of the high school, and for the teachers of the colored schools as well.

#### SUMMARY.

1. Columbia women teachers are in the same wage class with the drivers of the city garbage wagons, street laborers, and motormen and conductors who have served less than a year. City stenographers get 50 cents a day more than the best-paid high-school women and 82 cents per day more than the best-paid grade teachers.

2. The teachers of Columbia, after paying for board, room, laundry, and car fare for the nine months of the school term have from \$185 to \$427.50 only, out of which they must provide their yearly allowance of clothing and their expenses for the three summer months.

3. The conditions are such that teachers remain but three years in public-school service.

4. The standards of teacher qualifications are constantly rising, requiring a larger technical preparation and a more expensive training.

5. Of the 165 cities in the United States in Columbia's population class, Columbia stands No. 8 from the bottom in the amount expended for teacher's salaries per capita of pupils in average daily attendance.

6. The salary schedule should recognize merit as well as length of service.

#### 2. NO PROVISION FOR A TEACHERS' RETIREMENT FUND.

The problem of securing proper provision for the teachers' comfort will never be adequately met until a retirement fund, preferably State wide in its scope, is obtained. While members of many

professions may well continue their work until they have reached a "ripe old age," the average teacher in the grades or in the high school should give way much earlier. It is pathetic to see old people retained in the classroom long after they have earned the right to retire, because they have no resources and no other means of securing a livelihood and because of gratitude for what they may have done through the unselfish pouring out of their lives in the years gone by. Young children demand of teachers flexibility, adaptability, freshness, vivacity, vigor, good humor, and ability to give and take.

Only the person whose interests have been many-sided; whose sympathies have been sincere; and whose roots have run down into deep soil retain the qualities of adaptability and versatility beyond the years of middle life. Indeed, the shallow person whose life is lived wholly on the surface of things very early begins, like the grain of wheat which fell on stony ground, to wither away in spirit as in body. With such a one, surely, by the time middle age is reached it ought to be made easy for her to withdraw from actual contact with children in the classroom. It is not easy at this time of life for her to turn to a new occupation; indeed, in most fields of activity the doors of opportunity are closed to one of such age who is without experience, except that gained in teaching. The future which such a one faces is not bright. Out of the meager salaries paid, and with the demands steadily becoming more insistent, it is impossible for the teacher to set aside enough, year by year, to keep her in comfort for long after her earning period has passed. The result is that teachers are retained in the schoolroom by sympathetic school officials long after they should have withdrawn, and then, finally, when their work becomes so inefficient that it can no longer be overlooked, they drop out all too frequently, in the end dependents. This is not just to the faithful teacher who has given the best years of her life to the training of the children of the community; nor is it just to the children themselves, who are entitled at all times to the best instruction and training by the best and most vigorous teachers it is possible to obtain. There is no parent in Columbia who should rest content until the proper authorities have not only put the salaries of the school corps on a reasonable basis, but have made it possible through the establishment of a retirement fund for every man and woman who has dedicated his life to the service of the children of Columbia to spend the years of declining age in peace and comfort and with honor.

#### THE PROGRESS OF THE MOVEMENT.

The movement to secure retirement legislation is a recent one in the United States, but it has grown rapidly in the last five or six years. In 1916 plans for pension or retirement allowances for teachers were in effect in 33 States. Of these, 21 were State wide in

their application, 5 applied to two or more cities in the State, and 7 affected a single city or county. In general, these systems fall into two groups: The "straight pension" type, in which the State, or the administrative unit, supplies the whole of the fund; and the "contributory" type, in which the fund is derived, in whole or in part, from dues or assessments paid at regular intervals by the beneficiaries themselves.

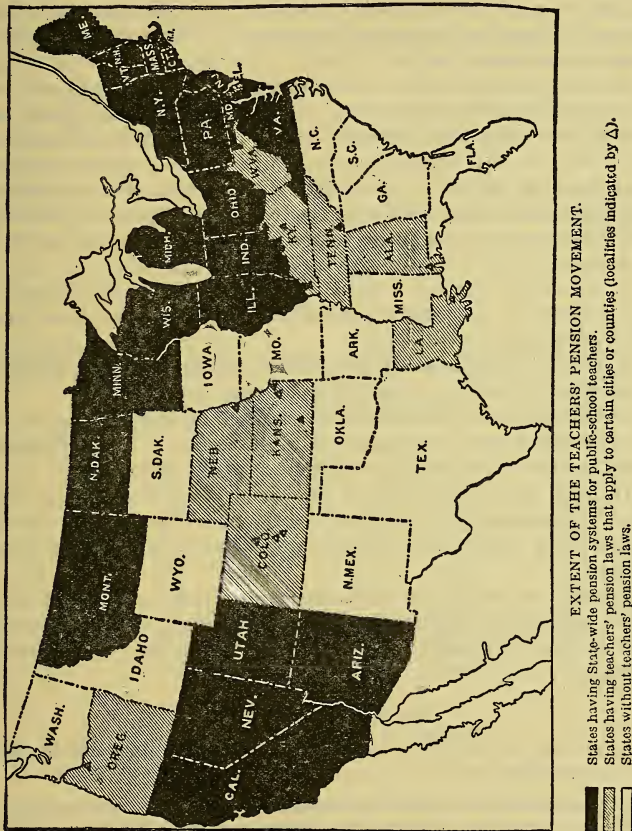
In practice the tendency, more and more, as the problem is given expert study and practical test, is in the direction of developing a system which shall be of the partially "contributory" type; which shall be State wide in application; which shall be jointly controlled by the public and the participants; and which shall be operated on the actuarial reserve basis, the rates of payment into the fund to be scientifically determined, so that the amount paid in during the period of service will be sufficient, with the interest which it will earn, to cover the benefits to be paid. The most recent, as well as perhaps the most comprehensive study which this complicated and difficult subject has received, has just come from the press: *Principles Governing the Retirement of Public Employees*, by Lewis Meriam, issued by the Institute for Government Research, Washington, D. C. (1918).

#### MERIAM'S STUDY OF THIS PROBLEM.

The writer holds that the ideal system of the future will provide benefits for superannuation; for permanent disability due to accident or to disease; for withdrawal from service, whether by resignation or dismissal; for death in active service; and for death after retirement, if the employee on retirement desires to accept such provision as an optional method of settlement. He suggests that compulsory superannuation retirement at a specified age rather than upon length of service should be required, though a provision for the retention of an employee on account of unusual merit not to exceed five years may be desirable, as would be a provision permitting retirement at not to exceed five years below the compulsory age. As to benefits, he regarded it as essential that the precise basis for determining the amount which shall be paid should be prescribed by law and not be left to the discretion of administrative officers.

Instead of making the superannuation benefit or annuity directly proportional to salary he would have it consist of: (1) A certain fixed sum payable to all alike; and (2) an amount which would be practically equivalent to a definite proportion of the average salary received during the last five years or so of service, the two taken together making up the total allowance which, in general, should not be less than the minimum of subsistence. Disability benefits, on the other hand, can not be based, he believes, solely on the purchas-

ing power of accumulations to an individual's account, a procedure which he recommends in the case of a superannuation benefit, but should be provided for on a collective insurance basis accomplished by either one of two methods—(1) through having each employee insured against disability for a certain specified sum and varying



the premium according to the cost of the insurance at the employee's age of entrance; or (2) having each employee pay for a certain amount of disability insurance and letting the purchasing power of this premium determine the amount of the insurance which shall be paid over in the event of disability.

Regarding the third class of benefits, that for withdrawals, the writer holds that benefits should be considered as part of compensation for service rendered, and that the participating employee holds, therefore, an equity not only in the contributions which he himself makes to the retirement fund but also in whatever the State may contribute in his behalf. In consequence, upon withdrawal from whatever cause, the beneficiary should be entitled to the whole amount except that part already expended in giving him the protection he has already had.

In the event of death in active service, this report suggests, the minimum benefit should be the accumulations to the individual's account, with compound interest, whether these accumulations have resulted from the employee's own contributions or from contributions made by the State in his behalf. As to death after retirement, the suggestion is that such a contingency should be met by offering the following optional modes of settlement, the choice of which is to be made at the time of retirement:

1. An annuity for life, with no payments in the event of death, a plan suitable for one without dependents or whose dependents have been adequately provided for.

2. For the one with a wife or husband only to consider, a last survivor annuity, payable as long as either shall live.

3. For a person with dependent children, an annuity payable to the individual until death and then to the family until the youngest child shall have reached 18 or some other predetermined age.

In each case, the amount of the annuity would depend on the amount standing to the employee's credit on retirement; this sum to buy as much annuity as it would purchase under any one of the three classes.

Perhaps the two plans which most nearly embody the chief features of Meriam's study are the Pennsylvania plan, now in operation, and the one proposed for the District of Columbia. The essential features of each follow:

#### THE PENNSYLVANIA PLAN.

According to this plan the teachers are eligible to receive the following benefits:

1. *A superannuation benefit.*—This comprises an annual retirement allowance beginning at the age of 62 and continuing throughout life of one-eightieth of the average salary of the last 10 years of service, multiplied by the total number of years the teacher has taught.

2. *A disability benefit.*—This is an annual retirement allowance beginning upon disability, and continuing throughout the period of disability, applicable to any teacher who is disabled after 10 years of service. The amount of the allowance is one-ninetieth of the average salary of the last 10 years, multiplied by the total number of years the teacher has taught. The minimum al-



lowance in every case is 30 per cent of the average salary of the last 10 years, except that no disability allowance is to exceed eight-ninths of the allowance which would have been received had the teacher remained to obtain the superannuation benefit.

3. *A death, resignation, or dismissal benefit.*—Upon the death, resignation, or dismissal of any teacher the total contribution of the individual, together with 4 per cent compound interest, is returned to the individual or to his estate.

The new entrant to the school system will pay for these privileges such percentage of his or her salary during active teaching service as is computed to be sufficient to provide one-half of the superannuation benefit. The present teacher will pay such percentage of his or her salary during active service as is computed to be sufficient to provide one-half of that part of the superannuation benefit which is allowable because of future service.

The following tables give the percentage of salary required as a contribution from teachers at the time they began to participate. This percentage is computed to remain constant throughout the remainder of the period of service.

*Rates of contribution by teachers.*

[These rates are computed on an actuarial basis and are lower for men than for women because the mortality among men annuitants is higher than among women annuitants, resulting in a smaller number of payments to men and consequently in a reduction in the cost of the allowance.]

Age.	Percentage of salary required of—		Age.	Percentage of salary required of—		Age.	Percentage of salary required of—	
	Men.	Women.		Men.	Women.		Men.	Women.
18.....	3.33	3.09	33.....	3.49	4.07	48.....	4.20	5.10
19.....	3.33	3.71	34.....	3.51	4.11	49.....	4.27	5.20
20.....	3.33	3.74	35.....	3.55	4.16	50.....	4.34	5.29
21.....	3.33	3.75	36.....	3.58	4.21	51.....	4.41	5.40
22.....	3.34	3.78	37.....	3.62	4.27	52.....	4.49	5.50
23.....	3.34	3.79	38.....	3.65	4.32	53.....	4.57	5.61
24.....	3.34	3.81	39.....	3.70	4.38	54.....	4.64	5.72
25.....	3.35	3.83	40.....	3.74	4.45	55.....	4.73	5.83
26.....	3.36	3.85	41.....	3.79	4.52	56.....	4.81	5.94
27.....	3.37	3.88	42.....	3.84	4.59	57.....	4.90	6.07
28.....	3.38	3.90	43.....	3.89	4.67	58.....	4.98	6.18
29.....	3.40	3.93	44.....	3.95	4.75	59.....	5.08	6.31
30.....	3.42	3.96	45.....	4.01	4.83	60.....	5.16	6.42
31.....	3.44	4.00	46.....	4.07	4.92	61.....	5.30	6.59
32.....	3.46	4.03	47.....	4.14	5.01			

THE PLAN FOR THE DISTRICT OF COLUMBIA.

The essential provisions of this plan are as follows:

1. That a sufficient amount shall be deducted each month from the teacher's basic salary, not to exceed 8 per cent, to provide, on retirement, a certain annuity.
2. That the deductions are to be invested by the Treasury in bonds for the benefit of the teachers, and a board of investment is created consisting of Treasury officials and two teachers, none of whom draws additional salary because of service on this board.
3. That at the age of 62 the teacher may be retired at her own option or at the option of the board of education. At the age of 70 she shall be retired

unless the board for some particular reason thinks her services should be retained.

4. That at the age of 52 the teacher, if disabled mentally or physically, may be retired.

5. That when retired the teacher shall receive each month until her death a sum made up of two different accounts, the first being 1 per cent of the average basic salary for each year of service, and the second \$6 for each year of service. To illustrate: A teacher retiring at 62, after 40 years of service, having had an average salary of \$1,000 a year, would receive \$10 multiplied by 40. Then she would get \$6 for each year of service, which would be 6 times 40—\$240—or a total salary of \$640 a year. Of that amount 63 per cent would be contributed by the teacher herself from her own savings, and the remaining 37 per cent by the Government.

6. That there shall be a minimum for the ages of 62 and 70 of \$480, and for the age of 52 of \$420.

7. That credit may be given for service outside the District of Columbia not exceeding 10 years, and that the teacher must have been employed continuously in the District of Columbia since 52 years of age and for 10 years continuously prior to retirement.

8. That if the teacher leaves the service before the age of 62 or before retirement, she shall receive her savings, with interest, in one lump sum.

9. That in the case of death the savings shall go to the family of the decedent.

10. That the act be applicable to all teachers on the rolls of the District of Columbia in June, 1917.

11. That continuance in the service after the passage of the act is declared to be consent to the provisions of the act.

12. That teachers may be discharged as before.

13. That an appropriation of \$50,000 be set aside for payments up to June 30, 1919, and \$5,000 for the expenses of operating the system.

14. That the annuity shall be exempt from attachment or execution for debt or taxes.

#### SUMMARY.

1. The movement, providing for retirement funds for teachers is growing very rapidly, for it is recognized that the welfare of the children fully justifies such provision.

2. The type which is coming into general favor is one having the following features: A fund derived in part from the beneficiaries and in part from the State; joint control by the State and by the participants; operations placed on an actuarial reserve basis, the rates of payment into the fund to be scientifically determined; benefits provided for superannuation, permanent disability, withdrawal from service, death in active service or after retirement, and compulsory retirement at a specified age.

#### IV.—INSUFFICIENT MAINTENANCE LIMITS THE ACTIVITIES ATTEMPTED.

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##### 1. THE SCHOOL DEPARTMENT OFFERS NO KINDERGARTEN WORK.

Though the kindergarten is the youngest member of our educational family, its active growth in this country falling well within the last half century, yet it has won its way to an established place in our school system, as a glance at the record of the growth of the movement will show. The first kindergarten in this country to be organized in connection with the public-school system, was established in Boston in 1870, but was discontinued after a few years. For 20 years the movement grew very slowly, so slowly, in fact, that by 1890 it had secured legal recognition in but a half dozen States and formal adoption in no more than 5 or 6 of the larger cities and in but 25 or 30 of the smaller. Now, however, nearly every State in the Union has permissive kindergarten legislation and, as shown by the 1915-16 statistics of the United States Bureau of Education, 1,228 cities report a total of 8,463 kindergartens with an aggregate enrollment of 434,022 children and employing nearly 9,000 teachers.

##### BASIC PRINCIPLES OF THE KINDERGARTEN.

Froebel, the founder of the kindergarten, conceived the true educational process to be one which is rooted and grounded in the child's own spontaneous self-activity; for, he held, the impulses which cause humanity to aspire to progress are instinctive and will be expressed spontaneously in childhood through play if opportunity be afforded. He believed, therefore, that the play impulse, so characteristic of young children, should be looked upon as the chief agency in education. So he insisted that children be permitted to play with the same freedom that they would exercise if at home, and yet, withal, that this play be conducted under the eye of a teacher who should be wise enough to organize and interpret these expressions of the child's instincts and give them significance without inhibiting the exercise of his spontaneity.

The various play activities of childhood, Froebel held, fall naturally into two groups: That in which the qualities of a social character, such as cooperation, subordinating individual desire to the group will, and the ability to give and take, are developed; and that in which the child gains certain necessary sense impressions and perceptions. To the first of these belong group games, such as games

of skill and dramatic games, in which children impersonate such social workers as the farmer, the carpenter, and the housewife. Activities belonging to this group require no material equipment. To the second belong the activities centering about the playthings or "gifts" which he proposed to place in the child's hands at successive intervals and the various manual "occupations" which were designed by him to keep pace with the child's growth and interest. By means of the "gifts," arranged in series, and the activities associated therewith, the child is to be made conscious of the simple but fundamental ideas of color, of form, of number, of dimension, of weight, of sound, and of direction and position. Through the "occupations" which he outlined opportunity is provided, he holds, for an exercise of the powers of perceiving, observing, thinking; and for the gaining of certain artistic appreciations through constructing things having harmonious and pleasant forms.

The kindergarten practice in this country has received an extremely searching examination and appraisal, for it has been forced to square its principles and methods by criteria which have come into our present-day thought as a result of investigations in the fields of physiological psychology and of child-study and through the contributions made to the discussion by the Herbartians. These criteria have profoundly modified kindergarten theory and practice as set forth by Froebel and interpreted by his followers, but the Froebelian conceptions that education is a process of development rather than one of instruction; that play is the natural means of development during the first years; that the child's creative activity must be the chief factor in his education; and that his present interests and needs rather than the demands of the future should determine the material and method of instruction are all conceptions which are sanctioned by the conclusions reached in the fields of modern educational investigation and research. In consequence of this critical examination kindergarten practice has been profoundly modified, but the fundamental things for which Froebel stood, and upon which kindergarten activities are based, are more generally endorsed than ever before, and it can confidently be said that the kindergarten is now so thoroughly established in public confidence and so strongly grounded in accepted theory that its place in our school system will never again be seriously endangered.

#### THE INFLUENCE OF THE KINDERGARTEN ON PRIMARY EDUCATION.

In turn, the kindergarten idea is having a reciprocal influence of far-reaching character on the aims and methods of elementary education, especially of the primary grades. Beautifying the schoolroom with pictures and plants; the introduction of movable desks and

chairs in the lower grades; the substitution of songs and games and dramatic plays for the formal drills and the rigid, repressive discipline; the appeal to the child's fancy through story-telling; the sympathetic attention to the child's physical needs; the use of out-of-door excursions and work with garden plats; the employment of many forms of handwork in the schoolroom; and the growing practice of having the long vacation come during the inclement winter months instead of during the summer, an arrangement especially suited to little children; are some of the results of the recognition in the grades of the validity of the principle underlying kindergarten activities, that education comes by way of the child's own self-activity.

#### EFFECT OF KINDERGARTEN TRAINING ON PROMOTION.

While the kindergarten is primarily concerned with the content of education and its spirit and with the fullness of the life of the child, matters which do not lend themselves to statistical evaluation, nevertheless studies have been made which tend to show that the child who has had kindergarten training is likely to make more rapid progress through the grades than those who have had no such training. A study made in Kenosha, Wis.,<sup>1</sup> for example, based on the records of 925 children who had had kindergarten instruction and 738 children who had entered school without such training, while not conclusive, suggests that the first group had fewer who were retarded in their later school work. Supt. Harvey, of Pawtucket, R. I., found in his schools that 60 per cent of the children entering school under the age of 5 years and 3 months, without kindergarten training, failed of promotion against 35 per cent of those who had had kindergarten training. Of those entering whose ages fell between 5 years 3 months and 6 years, 39 per cent failed who had had no kindergarten training against 16 per cent of those who had been through the kindergarten. And of the children 6 years and over, the failures in the two groups stood at 21 per cent and 10 per cent, respectively.

A more recent study of the effect of the kindergarten in lessening the number of repeaters is that by a committee appointed in 1915 of the superintendents and school boards branch of the Michigan State Teachers' Association, reported by Berry. The report shows that this question of the influence of the kindergarten was studied in the records of one group of schools in the Lower Peninsula region of Michigan which consisted of 94 towns and cities, 19 of which were without the kindergarten and 75 having this form of organization.

<sup>1</sup> Bradford, Mary D.: *The Kindergarten and its Relation to Retardation*. Nat. Educ. Assoc., 1912, pp. 624-29.

The facts regarding repetition, as disclosed by this report,<sup>1</sup> follow:

*Influence of the kindergarten on repetition in Michigan.*

	Number of cities and towns.	Percentage of repeaters in all grades.			Percentage of repeaters in the first grade only.		
		Boys.	Girls.	Both.	Boys.	Girls.	Both.
No kindergarten.....	19	13.8	10.2	10.2	27.4	15.6	27.7
With kindergarten.....	75	11.0	7.8	7.8	15.2	10.4	12.8

That is, in the 19 towns without a kindergarten the percentage of repeaters, all grades considered, is 28.7 per cent greater than in the 75 towns having kindergartens; while in the first grade taken by itself the table shows that the percentage of repeaters in the towns having no kindergartens exceeds the towns having the kindergarten by 69.5 per cent.

The foregoing studies are significant, for they indicate that the kindergarten is an important factor in reducing repetition in succeeding grades and especially in the first grades. It exercises this influence, doubtless, both directly and indirectly; directly in the sense that such training tends to fit a child for quickly "finding himself" in the usual work of the school; and then indirectly by keeping children out of the first grade until they are more mature. Considerable pressure is brought to bear upon school officials in many places where no kindergarten has been established to admit children to the first grade before they have reached the age of 6. A percentage of repetition, therefore, in the first grade in such schools is due to the immaturity of such children. A study of this factor in causing repetition has never been made, it is believed. However, in the Michigan study, just referred to, it was found, for example, that in the 19 towns having no kindergarten 33 per cent of the enrollment of the first grade were not older than 5 years when they entered school, whereas among the 75 cities having the kindergarten this percentage was reduced to 7.8 per cent.

Another study of significance, but along a different line, was made by the superintendent of the Boston schools in 1913.<sup>2</sup> He asked 49 kindergarten teachers to do advanced kindergarten work with the children of 60 classes in the primary grades for two afternoons a week, continuing for a year. Great freedom was permitted in the choice of activities and in the arrangement of the program. Advanced "gifts" and handwork were used in most of the classes, the former for free construction and for number work, the latter for hand training and

<sup>1</sup> Berry, C. S.: A Study of Retardation, Acceleration, Elimination, and Repetition in the Public Elementary Schools of Two Hundred and Twenty-Five Towns and Cities of Michigan.

<sup>2</sup> Report of the United States Commissioner of Education, 1914, p. 349.

for free expression of experiences. Games were played, stories were told, and many excursions were taken to the woods, parks, farms, and beaches, providing rich materials for conversation and for expression through handwork. At the close of the year 60 primary-grade teachers, who were the regular teachers of the classes, were asked for reports and frank comments on the experiment. All but one reported favorably, while many spoke of the results in terms of enthusiasm.

#### THE SITUATION IN COLUMBIA.

In Columbia there is a considerable sentiment favorable to the kindergarten, as witnessed by the fact that several private kindergartens have been established in the city, and one free kindergarten supported by the Sunshine Society of the King's Daughters and holding its sessions in a spare room of the Blossom Street public school. As with most philanthropic enterprises which depend upon voluntary contributions, support of this kindergarten is intermittent, spasmodic, and inadequate. At the time this room was visited the teacher had not been paid her salary, a modest sum at best, for several months. Besides carrying on her regular work with 35 children without assistance, she was supplying hot luncheons for them as well. Despite the meagerness of her equipment, which had been donated by various individuals, good work was being done. With the vacant rooms now to be found at several of the schools, it would be a simple and relatively easy matter to take over this work already begun and extend it by establishing the kindergarten at other desirable centers. In the doing of this, practical questions concerning organization and administration will arise. To meet requests for information as to current practice among the kindergartens of the country the United States Bureau of Education has issued a summary which can be obtained without charge upon request.<sup>1</sup>

#### SUMMARY.

1. The kindergarten has secured an established place in the American public school system.

2. It is based on the belief that the true educational process is one founded on the child's spontaneous self-activity. This conception, advanced by Froebel, has been supported and reenforced by modern educational theory.

3. The kindergarten training helps a child to make an adjustment to school conditions, keeps children out of the primary grades until they are more mature, and lessens the number of repeaters in the primary grades.

4. There is already considerable sentiment in Columbia favorable to the kindergarten, in response to which a private class has been

<sup>1</sup> United States Bureau of Education, Kindergarten Education Circular, 1917, No. 2.

organized in the Blossom Street school. This should be taken over by the school department and similar classes organized in other schools.

2. ONLY A BEGINNING MADE IN PROVIDING OPPORTUNITY FOR THE EXCEPTIONAL CHILD.

The contrast between the "old" and the "new" education, with their resultant types of schools, is not more marked in any particular than in the treatment accorded the defective and exceptional child. Formerly all children—normal, abnormal, subnormal, physically defective—were dumped together into the same hopper and ground through the educational mill just as though they possessed identical needs and equal abilities. Indeed, the requirements and procedure of these schools were formulated consciously for the "average" child. Newer education, however, recognizes that there is no such thing as the "average" child, and that, in point of fact, each child is an individual who differs from every other in capacity, in energy, in enthusiasm, in needs, in physical characteristics, in personal initiative, and, indeed, in every quality which enters into that complex organism which we call the child.

HOW THE NEEDS OF EXCEPTIONAL CHILDREN ARE MET.

The recognition of this fact has resulted in the devising of a number of plans which have made the school of very much more worth to the individual. These plans fall into two groups—one in which it is not required that the exceptional children of a given class be separated from their fellows; and the other, one which is based on the idea of segregation.

Permitting different groups to progress at different rates through the same course of study is an example of the first group of practices to secure greater flexibility. So also is the plan of modifying the course of study in the interest of different groups of individuals, whereby pupils are exempted from taking such subjects as technical grammar, advanced arithmetic, high-school mathematics, in order that special talent in music or in art may be developed. Again, certain schools, without segregating pupils, permit some who have difficulty with those studies requiring considerable abstract thinking to take subjects in which work with shop tools or with household equipment predominates. The plan of individual instruction is still another method which is designed to meet the needs of the individual without obliging him to be separated from his group.

On the other hand, there are a number of children in every system who diverge so far from the normal that for their own welfare and for the welfare of those with whom otherwise they would be asso-



ciated segregation into special groups or classes has been found to be necessary. Special classes for the deaf, the blind, the feeble-minded, the educable epileptics, the tubercular, the non-English-speaking foreigners, the markedly over-age, the refractory and troublesome, the specially gifted, as well as for those who are unable for any reason to attend the day school session, are examples of plans based on the idea of segregation which have been adopted by various school systems in the effort to minister to the needs of all.

## THE PROBLEM IN COLUMBIA.

In but two ways has Columbia been able to make a start toward introducing modifications of school organization and of school procedure in the interest of the individual child of exceptional needs, namely, through the vacation school and through the evening schools which have been organized at two points for mill school children of elementary grade. So far as other exceptional children are concerned, if they enter school at all, they either make their adjustment along with the others or else they drop out of school altogether. There are to be found in the system, however, a number who are persisting in their attendance upon the grades and yet who, because of physical or mental handicaps, are getting very little from the schools, while greatly hindering the progress of others in their classes. The following table shows the number in the Columbia schools who, in the estimate of the teaching corps, should be placed in separate classes for special instruction.

*Exceptional children distributed according to schools.*

	Epileptic.	Feeble-minded.	Deaf or nearly so.	Blind or nearly so.	Stammerers.	Markedly tubercular.	Non-English speaking.	Refractory.	Specially gifted.	Others.	Total.
<b>WHITE.</b>											
Taylor School.....	0	4	0	2	1	1	0	2	0	0	10
McMaster.....	0	6	4	1	3	0	0	3	0	1	18
Logan.....	0	6	3	6	4	1	0	7	3	25	55
Shandon.....	0	1	2	0	2	1	0	0	7	0	13
Waverley.....	0	2	0	0	0	0	1	1	0	0	4
Blossom Street.....	0	9	1	0	0	0	0	4	0	2	16
Granby.....	0	0	0	0	1	0	0	0	0	0	1
High.....	1	1	1	2	1	0	0	1	6	4	17
Total.....	1	29	11	11	12	3	1	18	16	32	134
<b>NEGRO.</b>											
Howard.....	1	19	4	8	10	1	0	0	15	0	58
Booker Washington.....	0	2	0	2	2	1	0	0	4	0	11
Total.....	1	21	4	10	12	2	0	0	19	0	69
Grand total.....	2	50	15	21	24	5	1	18	35	32	203

*Exceptional children distributed according to grades.*

Children.	Grades in white schools.				Grades in negro schools.				Grand total.
	1 to 4.	5 to 7.	High.	Total.	1 to 4.	5 to 7.	High.	Total.	
Epileptic children.....	0	0	1	1	0	1	0	1	2
Feeble-minded.....	27	1	1	29	20	1	0	21	50
Deaf, or nearly so.....	7	3	1	11	4	0	0	4	15
Blind, or nearly so.....	8	1	2	11	8	2	0	10	21
Stammerers.....	10	1	1	12	6	1	5	12	24
Markedly tubercular.....	2	1	0	3	2	0	0	2	5
Non-English speaking.....	1	0	0	1	0	0	0	0	1
Refractory.....	17	0	1	18	0	0	0	0	18
Specially gifted.....	3	7	6	16	7	2	0	9	25
Others.....	27	1	4	32	0	0	10	10	42
Total.....	102	15	17	134	47	7	15	69	203

## A PLAN SUGGESTED.

Obviously in each of the foregoing divisions of exceptional children there are too few to justify the expense of establishing special classes for each, but by providing three classes for the white children, one for the feeble-minded, one for the blind, and a third for the deaf, the regular classes will be greatly relieved, and much can be done for those unfortunates by placing them in small divisions to themselves in the charge of teachers who are specially trained for their work.

There is another division of pupils, however, who are perfectly normal, but who deviate from established standards because of illness, of absence, of temperamental traits, of transfer from other school systems, or for other reasons, but who, with more individual attention than the regular teacher can give, could easily be brought into conformity to the scholastic requirements of their own or of another and more advanced class. For such as these the device of the ungraded class, or of the "restoration" or "opportunity" class, as it is called in places, has been found to be of much value. To be successful the ungraded class must be small, not larger than 20 or so; must be in the charge of a teacher of exceptional strength; and must be conducted on the basis of individual rather than of class recitation. To this class, usually one in each of the larger schools, are assigned those who need special help. After the purpose has been accomplished for which the pupil was assigned, he is restored to his own group or to an advanced class, if he has been working with promotion in view, and his place given to another. Such a class, organized in each of the larger schools of Columbia, would take care of the "specially gifted," the "stammerers," and the unclassified exceptional children among the whites listed in the foregoing distribution.

As for the negroes, provision should be made in a similar way for the education of the defectives and for other types who deviate from the normal. However, there is as yet so much to be done in the way

of providing opportunity for the normal children of the colored race that but little attention can be given to the defectives, however much it is needed. Clearly, the State in its effort to secure good citizens must provide the means by which individuals may secure the needed training. Furthermore, when the State requires attendance upon school of all children of specified ages, it is peculiarly the responsibility of the State to provide the means whereby all children, abnormal as well as normal, may secure an education. To demand school attendance without providing the opportunity for making such attendance profitable is quite as unreasonable and unprofitable for the negroes as for the whites.

In addition to continuing and extending the work of the vacation and of the evening schools, the survey committee would recommend that, for the exceptional children of the department, three classes for the defectives of the white schools be established and that the department provide transportation for all who can not afford the car fare needed to reach these classes. Furthermore, it recommends that one restoration class be established in each of the larger schools for the benefit of those whose adjustment to the work is not satisfactory. It suggests, further, in connection with the vacation school already instituted, that the movement now on in many parts of the country whereby the vacation school is expanded into one unit of an all-the-year school be investigated.

#### THE ALL-YEAR SCHOOL.

Columbia holds a vacation school during the summer for both high school and elementary school pupils, attended for the most part by those who have failed in some part of their work during the year and who are trying to make it up. The school is in session for eight weeks and for three hours daily. By extending the period to 12 weeks with a full daily session and making it an integral part of the school organization, many advantages will accrue. The school plant will be used to its maximum; pupils who now require 11 years to complete the entire course will be enabled to cover it in 9 years if they choose to attend continuously; pupils who do not wish to attend continuously can have a choice as to when to take their long vacation; it provides profitable employment for many pupils who otherwise would be running the streets during the summer; and it affords another method for introducing flexibility into our school organization in the interest of the needs of individual pupils, for it enables a child to proceed through the school course at any one of several rates of speed.

At Eveleth, Minn., when this plan was adopted, the year was divided into four terms, each consisting of three school months of four weeks each. The contracts with teachers were changed to call

for a teaching period of three terms each year, though in instances teachers were permitted to teach for the four terms at a proportionate increase in salary. Children were required to attend at least three terms each year, though, upon securing permission, many were allowed to attend for the full time.

Deffenbaugh's study<sup>1</sup> of what is being done in this direction shows that cities where this plan has been tried report that it is received by children, parents, and teachers with much favor. It is proving also that, instead of adding to the expense of a department, it works an economy, as facts which are adduced show. The courses of study, too, are easily reorganized to suit this form of organization. Furthermore, there is abundant evidence to show that, contrary to popular belief, the attendance upon school for 48 weeks in the year is not injurious to a child's health. Indeed, as Deffenbaugh points out, reports on this point from physicians and nurses go to show that children who are out of school during July and August come back in September in poorer physical condition than those who have attended school. One physician, quoted by Deffenbaugh, probably states the situation accurately, when he says:

If the children could go to the country and live a normal life with plenty of exercise I would favor this to keeping them in school, but since conditions are such that none of the children who are in the tenement districts can go to the country, the best place for them for four or five hours a day is in the schoolroom, on the school playgrounds, and in the school shops and gymnasiums.

#### SUMMARY.

1. There are now enrolled in the system 203 children who are exceptional in the sense that their needs are such that they should be placed in special classes for individual instruction by teachers definitely trained for such work.

2. To meet the need among the white children, three special classes should be organized; one for the feeble-minded, one for the blind, and one for the deaf. Transportation for those living at a distance and who can not afford the car fare required should be provided.

3. A "restoration" or "opportunity" class should be organized in each of the large schools.

4. The same facilities should be provided for the negro children as soon as the housing needs of the children who are normal have been met.

5. The evening schools should be continued and expanded and the vacation school should be extended into an all-year school.

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<sup>1</sup> Deffenbaugh, W. S. Summer Sessions of City Schools. U. S. Bureau of Education, Bulletin, 1917, No. 45, pp. 20-29.

3. NO INSTRUCTION IN AGRICULTURE GIVEN AND NO WORK OFFERED IN  
SCHOOL-SUPERVISED HOME GARDENS.

AGRICULTURE IN THE HIGH SCHOOLS.

Columbia is the center of a large rural area. Its location, at the southeastern edge of Richland County, makes it the business center of Lexington County and of large sections of several other counties. The following table shows the essential facts regarding the extent of the farming industry of Richland and Lexington Counties.

*The farming industry in Richland and Lexington Counties.*

Farms and value.	Richland County.	Lexington County.
Number of farms.....	2,748	4,486
Native white farmers.....	867	3,133
Foreign-born (white) farmers.....	9	5
Negro and other nonwhite farmers.....	1,872	1,348
Percentage of land area in farms.....	53.1	84.7
Percentage of land area improved.....	47.7	35.1
Average acres per farm.....	75.5	100.7
Average acres, improved, per farm.....	36.0	35.4
Value of all farm property.....	\$6,427,733	\$10,744,463
Average value per farm.....	\$2,339	\$2,395
Value of the land per acre.....	\$21.29	\$15.58

OWNERSHIP AND TENANCY OF FARMS.

In Richland County less than one-half of the farm land is improved, and the production per acre is low. This low production is due to the one-crop system and to the large number of tenants who operate the farms. Near Columbia the number of farms operated under the tenant system is larger than in the more remote counties, due to the fact that large numbers of farm owners live in town. Of the 2,748 farms in Richland County, 1,826 are operated by tenants, 1,549 of whom are negroes. In the farming section of the county there are two negro farmers to every white farmer.

A summary of the facts concerning the ownership and tenancy of farms in Richland and Lexington Counties follows:

*Ownership and tenancy of farms.*

	Richland County.	Lexington County.
Farms operated by owners.....	901	2,499
Percentage.....	32.8	55.7
Native white.....	575	2,268
Foreign-born white.....	8	5
Negro and other non white.....	318	226
Farms operated by tenants.....	1,826	1,979
By share tenants.....	211	1,050
By share-cash tenants.....	9	53
By cash tenants.....	1,460	752
Tenure not specified.....	146	94
Color and nativity of tenants:		
Native white.....	276	858
Foreign-born white.....	1	0
Negro and other non white.....	1,549	1,121
Farms operated by manager.....	21	8

With the large number of farms shown in the forgoing table operated by tenants, it is hardly to be expected that the best agricultural methods will be followed. Cotton and corn are the principal crops, and on the tenant farms the same crops are often replanted on the same land year after year without respect to the reduction in the fertility of the soil. When the soil gets too poor, the tenant can move.

#### VOCATIONAL POSSIBILITIES OF AGRICULTURAL TEACHING.

The growth and wealth of the city and county are interdependent. To promote growth and increase wealth, an improvement in agricultural knowledge is necessary. Even in the city agricultural instruction is needed. Many of the city men now own farms that their sons will be required to operate or of which they must direct the operation. To the large number of boys leaving school, agriculture offers the most promising field of vocational employment. To be able to increase the agricultural wealth of this section, these boys must, however, receive practical agricultural training. The keynote to agricultural instruction centers in the high school. At the present time the Columbia high school does not offer any courses in agriculture. The only related subjects now taught are physics, chemistry, and biology, which are elected by only a few students and are taught in an academic way.

The vocational possibilities of agriculture are so great in the region about Columbia that strong courses in agriculture should be organized at once. The organization of successful school-directed home gardening in the grades should depend for its direction and supervision on the high-school agricultural department.

#### WHAT THE COURSE IN AGRICULTURE SHOULD BE.

1. Agriculture as a vocational subject should be given a prominent place in the high-school course of study. The subject should form the center of a course rather than be an elective in many courses.

2. The agricultural instructor should be employed for 12 months each year.

3. The full time of the agricultural instructor should be given to his subject, and he should not be burdened with other duties or routine.

4. The course should be so arranged that by combining the students graduating in odd years in a single class and the even-year pupils in another class, one instructor can direct the project work and study of each of his pupils during a full half of the school time through a four-year course. The following are recommended: Kitchen garden, first year; small animals, second year; farm animals and farm crops, third year; and fruit growing and market gardening fourth year—moving from the simpler to the more complex forms, a logical method of approach to the subject.

5. All high-grade students taking agricultural courses should be required to conduct home projects, and credits should be withheld until the projects have been completed and approved by the high-school instructor.

6. It is recommended that in the Columbia high-school agricultural department the students give half time to the study of agriculture vocationally and half to the study of cultural subjects. The division of time recommended in the Massachusetts Board of Education Bulletin 1916, No. 23, has proved very satisfactory in many parts of the country.

SCHOOL-DIRECTED HOME GARDENING IN THE UPPER GRADES OF THE ELEMENTARY  
SCHOOL.

Of 852 boys reporting from the fourth, fifth, sixth, and seventh grades of the white grammar schools, 566 or 66 per cent had no money-earning employment after school hours or on Saturday. During the vacation last summer, 546, or 64 per cent of all white boys reporting, were not employed outside the home in money-earning occupations. For work after school hours and on Saturday the average earnings of the children were \$2.70 per week. The average earnings for the last summer vacation were \$4.34 per week. Of the 852 boys, 601 state that they have some home duties, but in most cases these duties are irregular and of small economic value to the home. The average number of hours per week that the boys are employed in home work is only five. Two hundred and twenty-six boys receive some pay for their home work.

Of the 873 grammar-school girls, 841, or 96 per cent, report that they have no money-earning work outside the home during the out-of-school hours, and 848 of them, or 97 per cent, were not employed during the last summer vacation. Of the small number who were employed, the average earnings were, after school and Saturday, \$1.85 per week and \$3.59 per week during vacation. Of these girls, 519 claim some duties in the home, but the average number of hours worked per week is only four.

The following table shows the important facts regarding the occupations and employment of children of the white elementary schools belonging to the fourth, fifth, sixth, and seventh grades.

*Work of white children of the fourth, fifth, sixth, and seventh grades.*

Children.	Boys.	Girls.
<i>After school and on Saturdays.</i>		
Number reporting.....	852	873
Number employed.....	286	32
Number not employed.....	566	841
Percentage not employed.....	66	96
Average earnings per week of those employed.....	\$2.70	\$1.85

*Work of white children of the fourth, fifth, sixth, and seventh grades—Contd.*

Children.	Boys.	Girls.
<i>Vacation employment.</i>		
Number reporting.....	852	873
Number employed last summer.....	306	25
Number not employed.....	546	848
Per cent not employed.....	64	97
Average earnings per week of those employed.....	\$4.34	\$3.59
<i>Home work.</i>		
Average number of hours per week that children are employed in home duties...	5	4
Number who have home duties.....	601	519

## EMPLOYMENT OF NEGRO ELEMENTARY SCHOOL PUPILS.

Of the 225 boys reporting from the two colored grammar schools, 97 do not have money-earning occupations outside the home after school and on Saturday, and 68 were not employed last summer. The average earnings of these colored boys were \$2.29 per week after school and on Saturday and \$2.89 during vacation. One hundred and seventy of the boys have home duties which occupy their time on an average of eight hours per week. Twenty-seven boys receive pay for home work.

Of 514 girls reporting from the four upper grades of the colored school, 217 do not have money-earning work outside the home after school or on Saturday, and 401 were not employed last summer vacation. The girls who were employed earned \$1.46 per week for work while school was in session and \$2.17 per week in vacation. Of the girls, 399 have 11 hours of home work per week and 135 receive some money for this home work.

The following table shows the important facts regarding the occupations and employment of children of the fourth, fifth, sixth, and seventh grades of the negro schools.

*Work of negro children of the fourth, fifth, sixth, and seventh grades.*

Children.	Boys.	Girls.
<i>After school and on Saturdays.</i>		
Number reporting.....	225	514
Number employed.....	125	97
Number not employed.....	97	417
Per cent not employed.....	43	81
Average earnings per week of those employed.....	\$2.29	\$1.46
<i>Vacation employment.</i>		
Number reporting.....	225	514
Number employed.....	157	113
Number not employed.....	68	401
Per cent not employed.....	30	78
Average earnings per week of those employed.....	\$2.89	\$2.17
<i>Home work.</i>		
Average number of hours per week that children are employed in home duties...	8	11
Number who have home duties.....	170	399



## SUMMARY OF BOTH RACES.

Of the total number, 2,464, reporting from all schools, both white and colored, 543, or 22 per cent, were employed after school and on Saturday, and 601, or 24 per cent, were employed during the last summer vacation.

In the white schools the boys were employed in home duties 5 hours per week and the girls 4. In most cases these home duties are indefinite and do not require any regular amount of time. The colored boys are engaged in home work for 8 hours per week and the girls 11.

## AVAILABILITY AND ADAPTABILITY OF LAND FOR GARDENING.

Of the 1,728 children reporting from the white schools, 27 live in apartments, tenements, or flats where the back-yard space must be used by two or more families. The teachers of the upper grades of the six white schools report that 450 children have at least 400 square feet available for gardening, 189 have 800 square feet, and 197 have 2,500 square feet; 836 thus have 400 square feet or more in their own back yard that could be used for gardening. In practically all schools districts, with the possible exception of the Waverley and Blossom Street districts, there is enough land for every child to have a plat of 400 square feet or more, either in the home back yard or on vacant lots. There are large vacant tracts of land near the Waverley School, and the majority of the children attending the Blossom Street School come from parts of the city not as congested as that near the school building. The Shandon School district is ideal for the carrying out of school-directed home gardening, as the home lots are large and there is a large amount of vacant land. The Taylor, McMaster, and Logan Schools are in the older sections of the city, where the vacant land has been largely built upon. The house lots in the Taylor and McMaster districts are large, and in a large per cent of the homes there is enough back-yard space for the production of vegetables for the family. The planting of many shade trees has rendered some of these yards unfit for gardening, and in others much of the space has been used for the planting of "old-fashioned gardens" of flowers and flowering shrubbery. In the Logan School district the lots are smaller and there are fewer vacant areas. To the west and north of this district there are open farming districts that are within walking distance.

The soil in Columbia is a light sandy loam, ideal for gardening. The ridge on which a large part of the city is located is a continuation of the famous Dutch Fork truck crop section to the north of the city, and a smaller commercial vegetable-growing district is located on the same ridge to the south.

## THE SOIL SURVEY OF RICHLAND COUNTY.

The Bureau of Soils of the United States Department of Agriculture, in a "Soil Survey of Richland County," gives the following account of this soil:

The Orangeburg sandy loam is not widely distributed, being largely confined to a belt extending from a point near Columbia almost to the Wateree River. The city of Columbia and a number of its suburbs are situated largely on this type. Two areas occur in the Sandhill region. This type is most closely associated with the Marlboro sandy loam.

The surface over the greater part of the type ranges from nearly level to gently rolling. A few fairly steep slopes occur, but none of the land is too steep or rough for the use of improved farm machinery. All the type is well drained, but erosion is active in only a few places.

Its high-productive capacity makes this a relatively important type. Practically all of it is in cultivation, except the areas occupied by the city of Columbia and its suburbs. The type has only a moderate content of organic matter, but its power to hold moisture is comparatively good, and it is easily tilled. It responds readily under good farming methods, and is one of the best general farming soils in the State, being especially adapted to cotton.

Cotton is the leading product and the money crop. Corn follows closely in acreage, with oats and cowpeas next in importance, the former usually being cut for foliage. The type is not used for trucking to any considerable extent. Peaches are grown on a small scale for home use. Cotton ordinarily yields from one-half to one bale per acre, but as much as one and one-half bales per acre has been produced by a few farmers. Corn under good management yields from 25 to 50 bushels per acre, but the average return is between 15 and 20 bushels. Oats yield from 20 to 35 bushels per acre. The yield of cowpea hay ranges from 1 to 2 tons per acre.

The farming methods and fertilizer practices on this soil differ little from those on the Norfolk sandy loam. No cover crops are grown, and green-manure crops are grown by only a few farmers. Cowpeas are quite commonly grown in cornfields and after oats, but the seed is gathered and the vines are either pastured or cut for hay; so that the full benefit of a green-manure crop is not obtained. No other legumes are grown. In cotton and corn growing little or no care is used in the selection of seed. The only change in crops is from cotton or corn, with cowpeas or oats occasionally intervening. Most of the steeper slopes are terraced, but in some places the terracing has been poorly done. A large part of the type is farmed by tenants.

The sale value of farm land of this type ranges from \$50 to \$100 an acre, except in the immediate vicinity of Columbia, where it is held at a much higher price.

The subsoil structure of this type is such that there is considerable run-off, unless the surface is nearly level. All slopes subject to erosion should be farmed under the contour system. If this is not effective in checking erosion, terraces should be constructed at frequent intervals. Slopes too steep to protect by terracing should be used for permanent pasture or reforested. A good means of protecting the surface is the growing of winter cover crops, such as winter grains, cowpeas, and vetch. The vegetation not only serves to protect the surface from erosion but contributes to the organic-matter content when plowed under in the spring. The use of lime would be beneficial in connection with green manuring. Deeper and better plowing and frequent shallow cultivation of crops would make the soil more retentive of moisture. The

adoption of systematic crop rotations on this soil is advisable, and a greater diversity of crops should be grown, so that cotton would be a surplus product and other crops be grown extensively enough to supply the home and farm needs. Fruits, especially peaches, could well be grown commercially. Peach orcharding is successfully engaged in on this type elsewhere in this State and in Georgia.

The climatic conditions in Columbia are such that practical vegetable gardening can be carried on for the greater part of the year. The rainfall is generally well distributed throughout the year and by careful cultivation can, in most years, be conserved for the production of all crops without resorting to artificial watering. The city water is sold on a relatively high meter rate, which makes the use of city water in the vegetable garden expensive.

#### PRESENT AGRICULTURAL INTERESTS OF THE HOME.

In order to determine the value of instruction in the scientific care of gardens and of small animals of economic importance, it is necessary to learn in what percentage of the homes, gardens are made, and in what percentage animals of economic importance are kept. From a report of 1,728 pupils it has been found that in 812 white homes some kind of garden is made, and 459 children claim to have gardens of their own or are helping with the family garden. Many of the gardens are small and some of the children have reported lawn flower plats as gardens. The production is much less than should be the case if the gardening were done scientifically throughout the year. Poultry is kept at 302 homes, pigeons at 138, and rabbits at 51. In visiting the back yards it was found that the people need many lessons on the care and feeding of animals and especially on the keeping of animals in a sanitary condition. The pigeons and rabbits were in most cases kept as pets.

Of the 739 colored children reporting, 388 state that there is a garden in their home, and 188 children claim some share in the garden work. Poultry is kept at 268 homes, pigeons at 66, and rabbits at 10. The necessity for instruction in the care of these animals is greater than in the white homes, as the yards are smaller and less sanitary.

#### RELATION OF IDLENESS AND NONCOMPULSORY SCHOOL ATTENDANCE TO JUVENILE OFFENSES.

It was impossible to get as complete statistics of petty offenses and juvenile play activities that bring children into court as has been the case in other cities where surveys were made. Juvenile cases in Columbia are brought before the judge who hears adult cases. A definite record of juvenile cases was available only for the year 1917. During that year 529 cases of children between the ages of 8 and 17

were heard. The causes for a large number of these cases were listed under the following headings: Disorderly conduct, 208; petty larceny, 96; vagrancy, 44. The cases were distributed as to age, color, and sex as follows: Colored boys, 327; colored girls, 86; white boys, 111; and white girls, 5. The ages of the children are shown in the following table:

*Juvenile offenses.*

Male colored—		Male white—		Female colored—		Female white—	
Age.	Cases.	Age.	Cases.	Age.	Cases.	Age.	Cases.
17.....	78	17.....	21	17.....	16	17.....	2
16.....	53	16.....	17	16.....	33	16.....	1
15.....	38	15.....	13	15.....	13	15.....	1
14.....	30	14.....	9	14.....	7	13.....	1
13.....	39	13.....	9	13.....	7		
12.....	41	12.....	14	12.....	4		
11.....	19	11.....	8	11.....	2	Total.....	5
10.....	10	10.....	7	10.....	2		
9.....	5	9.....	7	9.....	2		
8.....	8	8.....	6	8.....	1		
				7.....	1		
Total.....	327	Total.....	111	Total.....	86		

As shown by the above table, a very large number of the offenses are committed by colored boys. By referring to preceding tables it will be noted also that a large proportion of the colored boys leave school before reaching the upper grammar grades. In the two colored schools there were 514 girls and only 225 boys reporting from the four upper grades. The boys are not required to attend school. It is often impossible for them to obtain work. In idleness they become vicious.

There is undoubtedly a very definite relation between the malicious mischief of children and the fact that they are not required to attend school. Many children found on the streets during school hours said they were not in school "because there were no seats for them." Several stated that they went to the nearest school, but were told that there was not any room for them in the grade they were fitted to enter. In all cases these children came to the school several days after the school term had opened, and without doubt some of the children did not go to the school at all, but simply used this as a method of excusing their absence.

An investigation of the number of white children of school age who were on the streets of Columbia one school day in April last between the hours of 9 a. m. and noon was made upon the suggestion of Miss L. S. Olney, superintendent of the Bureau of Protection, by students of the University of South Carolina working under the direction of Dr. Josiah Morse. A total of 140 children of school age were counted, of whom 90 were questioned about their absence.

It is thought that the results are typical of what may be found on any school day.

Interviews with 90 of the children brought out the fact that 28 were enrolled in school; 54 were not enrolled; and the remaining 8 made no statement on this point.

The reasons given for their nonattendance at school were as follows:

Sickness and vaccination.....	18
Working and helping at home.....	18
Poverty, no clothes, no books.....	13
Family moved or moving.....	13
Don't want to go.....	8
Parents indifferent.....	7
Truancy.....	6
Refused to answer.....	4
Expelled.....	3

As to the ages of these children, the following shows the distribution:

Ages.....	6	7	8	9	10	11	12	13	14	15	16
Number.....	4	12	7	10	13	8	5	9	9	6	7

Of the 28 children who were enrolled in the schools but who were on the streets, the following shows the distribution by age and by sex:

Ages.....	6	7	8	9	10	11	12	13	14	15	16
Boys.....	0	2	0	2	3	2	2	2	1	4	2
Girls.....	0	2	1	1	2	2	0	0	0	0	0
Total.....	0	4	1	3	5	4	2	2	1	4	2

From this investigation it would seem that about one-third of the children of school age who are out of school are enrolled in school, but not attending regularly. In certain parts of the city, especially the western part, there are certain localities where it is evident that there are large numbers of children of school age who are not attending school.

As shown by the lack of clothing, books, and the employment of children, poverty is an important factor in causing this irregularity of attendance as well as the failure to enroll in the schools. Nevertheless, this can be overcome in large measure through cooperation with the Associated Charities, and through the help of benevolent individuals. Though, without doubt, poverty is responsible for much of it, the chief factor in producing this situation is the indifference of parents. The need of the hour is the devising of some way of overcoming this failure of many parents to recognize the value of education to their children.

The need of an energetic enforcement of the compulsory attendance law is clear. With an efficient attendance officer who followed up every case of nonattendance promptly, this situation would soon be rectified.

PRESENT TRAINING AND POSSIBILITIES FOR FUTURE TRAINING OF THE CITY TEACHERS  
IN HOME GARDENING.

The principal of one white school reports that one teacher in his school is qualified to direct garden work and another reports that one teacher is partly prepared for this work. In the colored schools, one teacher in the Booker T. Washington School is training to direct the home gardening of children, but the Howard School does not have a teacher qualified to engage in the work.

At the present time practical courses in gardening are not given in any school in Columbia. The University of South Carolina offers several courses in agriculture. Teachers who wish to get special training for this work could do so in summer schools; however, teachers with native ability would gain as much by enlisting the children in school into home-gardening classes and studying books and bulletins on the subject.

In organizing a high-school course in agriculture, as outlined in the first section of this report, the high-school teacher of agriculture should become supervisor of the home-garden work of the grade children and should train garden teachers for each school.

Based on the number of children reporting from the upper grades of the grammar school, the following number of teachers would be required to direct the home gardening of the pupils: Blossom Street School, 1; Logan School, 3; McMaster School, 3; Taylor School, 2; Shandon, 2; Waverley, 1—twelve in all. This does not mean that 12 extra teachers should be employed, but rather that 12 of the regular teachers should be paid an extra salary for work after school and Saturday and during the summer vacation. On the basis of salaries paid teachers in other cities for this work, the teachers should receive an extra salary of \$10 per month for working after school and on Saturday for the nine school months, and \$50 per month for the three vacation months, or a cost of \$2.40 per teacher, requiring \$2,880 for the 12 teachers.

In the colored schools 3 garden teachers would be required in the Booker Washington School and 4 in the Howard School, which, on the same time and salary basis, would cost the school department \$1,685.

By this plan 19 garden teachers would be employed to direct the productive occupation of the 2,464 pupils, or 130 pupils per teacher, during the out-of-school time.

The total cost to the city would be \$4,565, from which investment \$24,640 would be returned if each child netted only \$10 for his year's work. Four or five times this amount should be produced.

#### SCHOOL-DIRECTED HOME GARDENING AS A PART OF THE SCHOOL CURRICULUM.

In the foregoing sections of this report it has been shown that a large percentage of the Columbia school children do not have definite occupation during the hours that they are out of school; that at least half of the daylight hours and half of the days of the year are spent out of school; that gardening and other agricultural activities of the city homes could be increased in money return by education; that there is enough vacant land in back yards and vacant lots to furnish a garden for practically all school children; that the soil is ideal for gardening and that the climatic condition is very favorable for year-round gardening; that a large number of boys commit juvenile-court offenses, which seems to have a direct relation to the large amount of time that the children are idle; that a large number of children do not attend school, and that of those who are enrolled the attendance is not regular, which facts may be partly attributable to the academic nature of all of the school work and the lack of manual work that appeals to the child and helps hold him in school; that only three teachers are now trained to direct garden work, but that a sufficient number could be trained in the high-school agricultural department to accomplish the work in all the schools; and that gardening as a part of school work would cost the city \$4,565, from which investment more than \$100,000 of wealth should be produced, not to mention the educational value which would accrue from the work.

#### THE RECREATIONAL ACTIVITIES.

The playground and recreation activities in the city are now organized as a department of municipal recreation without official connection with the schools. The supervisor of playgrounds directs organized games at the schools during the recess and noon-hour periods, and in the summer the playground teachers use the school grounds as play centers. In the main the cooperation between the school and playground department is working out harmoniously, but because the playground work is not considered a school activity the toilets and basement rooms for dressing rooms and storage are not open to the playground teachers and children. The supervisor as an official of the school department would, under the direction of the superintendent of schools, become a part of the teaching staff and could have direct access to the children at all times and freedom in the use of buildings and equipment. The supervisor of playgrounds should then have charge of organized games at recesses,

train the public-school teachers to conduct calisthenic relaxing exercises between class periods, utilize school grounds for the play of children and adults, and use the school buildings as community centers. As a part of the school system the recreational department should be most effective and eventually would be more economical to the city.

In his report for the school year 1916-17 the superintendent of schools recommended that the school board employ a director of physical culture and athletics, both in the school and on the playground and also that a larger use of school buildings as community centers be made. To establish such departments in the schools and to continue the work of the department of municipal recreation would mean a double cost to the city and an overlapping of effort. The work of both these departments is highly educational; the schools are or should be the centers of population and several of the Columbia schools have large playgrounds. Considering the question of recreation from all standpoints, it seems that it would be more efficient and more effective if placed under the control of the board of education.

#### SUMMARY.

1. That agricultural courses be introduced in the Columbia High School and that the instructor be employed for the full year.

2. That the instructor in agriculture require all pupils to complete an agricultural project at home which will illustrate the work of the school year. That the instructor visit the projects and give instruction in the scientific carrying out of the agricultural problem.

3. That the high-school instructor in agriculture be required to supervise the grade teachers in their direction of home gardening and to train these teachers.

4. That 12 teachers in the white schools and 7 in the colored schools be employed after school, on Saturdays, and during the vacations to teach school-directed home gardening.

5. That the 19 teachers to be employed be taken from the regular grade teachers who have been trained to do garden work by the high-school teacher of agriculture. That these teachers be paid an extra salary for extra work.

6. That the department of municipal recreation of the city be made a department of the schools, under the direction of the superintendent of schools, and that the department embrace all play-ground activities, the physical exercises of the schools, and the activities of the adult recreation and community centers.



4. NEITHER MANUAL ARTS NOR HOUSEHOLD ECONOMY TAUGHT IN THE ELEMENTARY GRADES AND BUT LITTLE IN THE HIGH SCHOOLS.

HOME MAKING THE CHIEF VOCATION OF WOMEN.

However rapidly the door of opportunity among the industries is opening to women, it is still true, and doubtless will always so remain, that for the greater proportion of American women home making is the principal vocation. And, indeed, no greater work for women can be conceived of, for in a very real way the health and material welfare of the Nation rest back upon the intelligent and efficient administration of the home. The battle, for example, to secure sanitary surroundings, to establish the habit of economy, to develop sound and sane thinking on public questions—all of which are necessary to withstand the attacks of disease, to forestall financial panics, to prevent social disturbances of critical character—can never be won except as the homes of the Nation are universally enlisted in the struggle and the home makers are prepared by education and training to execute their tasks skillfully.

The knowledge needed for efficient work in this connection does not come by inheritance, nor is it acquired merely through association with those who have it. Imitation of others and the process of "trial and failure" teach one much, but as methods of preparing for the complex activities of the home they are inadequate beyond a very narrow range. In one department of the home maker's activity alone, that of selecting and preparing foods, the woman who to-day is efficient has a knowledge of food sources, of food production, of the dietetic values of various foods, of the effect of heat upon each, of the healthful combinations which can be made with them, and of how these food combinations can be prepared and served in appetizing ways. Such knowledge presumes some understanding, at least, of several of the sciences and the relation of these to the home. Obviously, imitation and experience alone can never give such a content; specific training under intelligent direction must be had.

An important duty of the school is found just here, for this training needed by the prospective home maker can best be gotten through the medium of the school. The school, therefore, should see to it that before the girl drops out she will have had the maximum training in the arts and the sciences which contribute to home making. The school should provide opportunity for giving such a content to those young women also who are employed and yet who will ultimately find themselves at the head of a household. To a third group, too, the school should open its doors—to the group of adult women who already have homes of their own and yet who have never

had the opportunity to secure the training which will make them skillful and efficient in their households.

THE WAGE-EARNING PERIOD OF WOMEN.

The fact remains, however, that only a small percentage of the number who finally become home makers enter the vocation direct from the school. Many of them, and the proportion is rapidly increasing, spend a time after leaving school in the various wage-earning occupations which are open to women. In meeting the vocational needs of women, therefore, the problem of the school is a double one. First, there is the problem of providing the training which woman in her capacity as home maker will need; and, second, there is the problem of giving her in addition the training which she will need in the industries or professions which she will enter between school and marriage.

The transitory character of the wage-earning period in the lives of women is clearly brought out in a study made in the city of Cleveland by Lutz.<sup>1</sup> Lutz found that in Cleveland 60 per cent of the girls between the ages of 16 and 21 were at work in some wage-earning occupation. Of the group between the ages of 21 and 45 only 26 per cent were so occupied, while of the third group, 45 years and over, only 12 per cent were to be found enrolled among the industries and professions. While the proportions will undoubtedly vary in different cities, yet in this particular at least it is probable that Cleveland is nearly typical of the cities of this country.

Of every 1,000 of Cleveland women between the ages of 16 and 21 Lutz also found the following occupational distribution:

*Occupational distribution of 1,000 women wage earners (Cleveland) from 16 to 21 years. (Adapted from Lutz.)*

	Number.
<b>Manufacturing and mechanical industries:</b>	
Apprentices to dressmakers and milliners-----	4
Dressmakers and seamstresses (not in factory)-----	20
Milliners and millinery dealers-----	17
<b>Semiskilled operatives—</b>	
In candy factories-----	6
In cigar and tobacco factories-----	15
In electrical-supply factories-----	10
In knitting mills-----	11
In printing and publishing-----	8
Woolen and worsted mills—	
Weavers-----	5
In other occupations-----	7
Sewers and sewing-machine operators (factory)-----	53
Tailoresses-----	25
<b>Transportation:</b>	
Telephone operators-----	19

<sup>1</sup>Lutz, R. R. Wage Earning and Education, Cleveland Education Survey.

Trade:	Number.
Clerks in stores.....	28
Saleswomen (in stores).....	35
Professional service:	
Musicians and teachers of music.....	6
Teachers (school).....	4
Domestic and personal service:	
Charwomen and cleaners.....	5
Laundry operatives.....	13
Servants.....	81
Waitresses.....	9
Clerical occupations:	
Bookkeepers, cashiers, and accountants.....	26
Clerks (except in stores).....	20
Stenographers and typewriters.....	62
Not among wage earners.....	400
Scattered among unimportant occupations.....	111
Total.....	1,000

## THE TRAINING OF WOMEN FOR THE OCCUPATIONS.

An examination of this table shows that about 20 per cent of those who are wage earners work with the needle; about 10 per cent are in that group of occupations requiring some technical operative skill; 10 per cent are in the stores serving as clerks and saleswomen; 18 per cent are in domestic and personal service; 18 per cent are to be found among the clerical occupations; while the remainder, about 24 per cent, are scattered about in small groups among a number of lesser occupations. Except there should come about some such economic and occupational shift as now obtains throughout the country on account of the war situation, the future occupation of both boys and girls who are in a school system at a given time will in all probability differ but little from the occupational distribution of the adults of the community which obtains at the same time. Such a table, then, worked out for each community, for both women and men, will provide the school with a dependable basis for determining in detail what work it can give which will best meet the needs of those who are going to become the wage earners of the community.

Of the occupational groups of women mentioned in the foregoing table it is clear that the training needed for two of them, the needle workers and the workers in domestic and personal service, will not differ except in degree from that training which is needed by those who are to enter the more permanent vocation of the home maker. As to training for semiskilled operatives and for positions as clerks and saleswomen in stores, the school can not profitably accomplish much, for it lacks the proper equipment and the proper setting; furthermore, training for such vocations can best be obtained, it would

seem, in the vocations themselves. Only one group, then, remains to be considered, that comprising the clerical and secretarial occupations. Even here there is a considerable content of value to the prospective home maker, although certain elements in the training required for office work, while certainly not a hindrance to the home maker, yet are of necessity carried further than would be justified were home making alone to be considered.

It may be urged, however, that it is highly desirable that every woman become sufficiently skilled in some wage-earning occupation so that if she should suddenly become dependent for a livelihood upon her own efforts she will not find it difficult to make the adjustment. Were such training insisted upon, many a tragedy would certainly be averted. The school, therefore, in providing for the needs of the home maker need not hesitate in carrying certain phases of its work to a point where the young women will acquire skill sufficient to make them self-supporting. Indeed, if the school stops short of this point it is in serious fault, for it will not have done its full duty.

In meeting this twofold need of its girls, the school naturally will lean most heavily upon its department of household economy and its commercial department. The courses offered in both these departments should be so arranged that it will be possible to carry the work given from the standpoint of the home maker to such a degree of specialization and of proficiency in the junior and senior high-school periods that with a very little special technical training on the outside the girl can become self-supporting if the need should arise.

#### THE PROBLEM OF THE VOCATIONAL TRAINING OF BOYS.

With the boys the problem is much more complicated, for the range of occupations open to them and among which they will ultimately be distributed is as wide as business itself. Lutz's study of the occupational distribution of native-born men between the ages of 21 and 45, again referring to the Cleveland survey, shows the following approximate proportions:

*Occupational distribution of (Cleveland) men wage earners 21 to 45 years.*

	Approximate per cent.
Manufacturing and mechanical occupations.....	41
Commercial occupations.....	20
Clerical occupations.....	16
Transportation occupations.....	11
Domestic and personal-service occupations.....	5
Professional occupations.....	3
Public-service occupations.....	1
Total.....	100

As each of these groups includes a number of highly differentiated occupations, it is clear that the school as usually organized, as Lutz points out, will not bring together a sufficient number of pupils who are heading toward a particular occupation to justify, on the ground of cost alone, such differentiated courses as the ultimate vocational distribution would demand. Neither, it may be added, are the intentions of the individual pupils respecting future vocational placement sufficiently well known to justify a high degree of specialization of school courses in the earlier years at least.

#### THE MANUAL ARTS COURSE.

It would seem, therefore, on account of the immaturity of the boys of the elementary grades and also because there are too few whose future needs are definitely known, that a manual arts course, general in character, is all that the school can profitably offer in this first division of our school system. There is a content here, however, which is of definite value, for by its familiarity with the common tools can be given and some readiness developed in their use in connection with the making of the various common articles for which the manual-training shop provides opportunity. The shop, too, can be made the starting point for valuable general information about the world of industry, so that a foundation, in part at least, can be laid for an intelligent choice of a vocation when the time comes for the decision.

In the junior high-school division (the seventh, eighth, and ninth grades) more pupils are congregated at a given point; they are more mature; their future needs are somewhat more clearly defined in individual cases; and so the school here should find a convenient node for an approach to some of the more common industries and skilled trades. How far the school can go in specialized training for particular occupations here again turns largely upon local conditions respecting funds, equipment, and the grouping of the pupils as to future needs.

#### THE COOPERATIVE SCHOOL PLAN.

Inasmuch, however, as it would require an equipment prohibitive in cost to prepare fully for the training for any considerable number of the occupations of a given community, the plan is growing in favor of effecting an arrangement between the school and the established industries of the community whereby the pupils, both boys and girls, may spend half of their time in school and the other half in industrial or business plants, getting their training in the industry itself. The plan as developed provides that pupils shall pair off; that one of the pair shall be in school and his alternate in the particular business plant to which he is assigned; and

that at the end of every period, usually two weeks, a shift be made, the one in the school taking his place in the business while the one in the business plant returns to his school classes. Two weeks later the situation is reversed, and so on throughout the duration of the arrangement.

There are many reasons which can be urged in support of this plan of cooperation between the school and the business world. In the first place, it relieves the school of the necessity of installing a very expensive equipment. Then, it is impossible for the school to simulate closely enough the complex conditions under which most vocations are conducted to make the training which it gives of much practical value. Moreover, success in a given vocation often depends more upon adaptability to conditions that can not be reproduced in the schoolroom than upon mere knowledge of technique. Pedagogues can not be expected to teach the technique of specialized vocations any more than blacksmiths can be relied upon to enter the schoolroom and teach Latin. Instead, then, of bringing the great multitude of highly differentiated occupations into the schoolroom, the way out surely lies in taking the school to the occupations.

An approach to the industries, however, can profitably be made in the school shop and school office. The school can systematize, organize, and give an orderly presentation of the chief elements of many common vocations more quickly and more clearly than can years of work under the stress and strain of the activity itself. Then, opportunity can not always be provided for all of the pupils of a school who might desire practical work in their chosen vocation under actual conditions. Moreover, there are many students in both the junior and senior high schools who wish opportunity for general polytechnic experience without committing themselves to a particular occupation.

A combination of these two plans, then, it would seem, would best meet the complex needs of a community in respect to helping its youth in choosing occupations wisely and in giving the requisite special training for success in them.

#### THE SITUATION IN THE WHITE SCHOOLS OF COLUMBIA.

Formerly both sewing and manual arts were taught in the elementary grades of the Columbia schools, but when the high school was completed it was found that the funds were not sufficient to provide an adequate outfit for the high-school shops and sewing and cooking rooms, so the equipment of the grade schools was transferred to the high-school building and the work in the grades given up.

The high-school curriculum as now organized requires that all girls in the first and second years take sewing and cooking and that

the boys shall take shopwork in manual arts. An "industrial home economics" course is also provided for in the high-school schedule, but none of the girls has as yet entered it. In practice a pupil may sew about one and one-half hours each week and cook for the same length of time, though frequently this time allotment is cut down for other things. In an entire semester, as it works out, the aggregate sewing practice which a girl actually gets is not more than the equivalent of two and one-half days of eight hours each. In consequence of this brief time allowance and because of other unsatisfactory conditions the high-school pupil of Columbia becomes no more efficient in sewing and cooking than do children of the sixth and seventh grades of many cities.

Owing to these conditions the girls of the Columbia High School are given no opportunity to become proficient in judging of materials, in choosing designs, in developing a discriminating judgment as to the value of ready-to-wear garments, and in learning to appreciate suitable color combinations. Neither is there time for awakening an intelligent interest in problems relating to hygiene and sanitation, to household construction and furnishing, to household administration and accounting, nor to the nutritional and economic facts relating to foods.

The pupils in sewing do much more "model making" than progressive sewing teachers consider desirable. In the cooking classes the pupils follow closely the adopted text rather than bringing in material for the recitation from the outside. Then, too, their cooking recipes provide for the smallest quantity of prepared food only, a method which is comparable to "model sewing." This procedure is justifiable only when the time limits are such that no other plan is possible.

The method of registration in use in Columbia also reacts badly upon the work of the sewing and cooking teachers. The difficulty of making out individual term programs which do not conflict has led to the custom of permitting pupils in the home economics department to take their prescribed two years of work at any time during the four years of the high-school course. This results in mixed classes in both the sewing and cooking; that is, in classes having pupils of all degrees of advancement. In such a situation class teaching is impossible. In consequence, either the teacher must give up her time to individual instruction or else certain pupils are obliged to repeat work previously done. The same difficulty obtains also in the cooking classes.

The trouble undoubtedly runs back to the fact that in making out the pupils' program, cooking and sewing are given subordinate places, as compared with other subjects, and that whenever an ad-

justment of program is necessary it is made at the expense of sewing and cooking. If these subjects were given more consideration at the time when pupils are registered and schedules made out, the classification of pupils would be much more nearly uniform, resulting in turn in an improvement in the quality of instruction.

#### CONDITIONS ESSENTIAL TO GOOD TEACHING.

It is useless to discuss the quality of the teaching of home-economics subjects when done under such circumstances. With unprepared students, with classes of varying degrees of advancement, with short and infrequent periods of instruction and with classes which are overcrowded and which have insufficient equipment, good teaching is impossible. A complete change of prescribed course, additional time allotment to home economics, careful classification of students and improved equipment are necessary preliminaries to better teaching. Time to visit schools with modern equipment and standard methods of teaching is particularly needed by teachers of home economics, because this line of work is developing so rapidly that only by strenuous efforts and liberal opportunities for observation can teachers keep abreast of the newer practices in home-economics instruction. With the meager salaries heretofore paid to teachers, the travel and study so desirable for all teachers and so essential, particularly for those employed in teaching a new and unstandardized subject, are impossible.

The present equipment in the cooking laboratory of the high school is fair. The exposure of cooking utensils to dust is most insanitary, however. The desks should have been provided with drawers and the utensils protected thereby. The sinks are too few and are badly located. Congestion around them is inevitable when 22 girls attempt to secure water for cooking or for dish washing. The provision for hot water is so poor that each individual must heat water before washing dishes or cleaning desks, resulting in much waste of time and at the end of the lesson the hurried completion of the work. Neither is the present method of caring for the floors satisfactory. To sweep during the preparation of food is an insanitary practice, and to depend upon the pupils to take the entire care of the floor makes careful scrubbing and cleaning impossible. A food laboratory should be so well equipped and so sanitary in care and construction that it will become a standard for home conditions in both food preparation and in housekeeping.

Furthermore, the requirement that towels for hands and for dishes be brought from home is not desirable. In case infectious diseases exist in any home from which towels are brought there is risk that disease organisms may be left on the dishes which are later used by



other children. To depend upon the children remembering to bring fresh towels to each lesson foredooms the teacher to annoyance and disappointment.

The students in the cooking classes are not required to be as neat and as trim in appearance as they should be. Here also a standard should be set that could be transferred to the home kitchen of the girl. Pantry furnishings are inadequate as now supplied, and the total lack of dining-room furniture makes the teaching of food service impossible. The sewing room is well lighted and pleasant. There is a reasonable supply of sewing machines, but the tables are not of a type that are most convenient for work. So many charts, well illustrated books, wall exhibits, and educational exhibits are obtainable, that no school is justified in not providing these aids for teaching, yet Columbia's department of home economics is without the commonest of these.

It is desirable that pupils in the public schools be given opportunity to study the textile industries of the region and that excursions to the stores and the markets be regularly arranged for and reported upon in the classroom. Such work, where it is handled intelligently, will enable the girls to become intelligent and discriminating purchasers of household supplies. It will tend also to stimulate in them a healthful interest in civic problems.

#### THE CONTENT WHICH SHOULD BE GIVEN.

Home-economics training for the girls and manual arts for the boys should begin when the children are about 11 years of age. This means the organization of the work in the fifth grade for the usual students and in the fourth grade for over-age children and also for those who will probably leave the schools without entering the high school. Preliminary to definite work of this character there should be handwork for both boys and girls from the first to the fourth grade, inclusive.

The first year of definite instruction in home making should consist of lessons in sewing and housekeeping. Such sewing as is done should be upon articles useful either to the child herself, to her doll, or to her mother, thus providing a motive and incentive. Each assigned task should be of a type that may be completed within a few weeks, that interest may not lag and a distaste for the work develop. In this and in all other home-economics work there should be flexibility in the courses arranged. The ends to be accomplished should be predetermined, but the particular problems to be assigned should be varied to meet the interests of the children.

Crocheting, knitting, tatting, and simple designs in cross-stitching come properly in this first course. The fingers are thereby trained and an appreciation for color and design developed. Paral-

lel with this fifth grade sewing, instruction in the care of household equipment and furnishing should be given. This is the time to teach careful and efficient dish washing, the care of left-over foods, the care of the refrigerator, the nice setting of the table, the dusting of living rooms and the putting of them in order, the making of beds, and the caring for the bathrooms and of the toilet articles. In the mill village section, the second semester might consist of lessons and instruction in personal hygiene. In the sixth grade the sewing should be paralleled by cooking and the practices of good housekeeping constantly reviewed. Here also one-half year may profitably be devoted to sewing and one-half year to food preparation. The use of the sewing machine should be taught in the sixth grade, and thereafter attention should be given alike to neat, expeditious, handwork, machine work, and the use of commercial patterns.

Small-quantity cooking is advisable during this year. The hands of little children are weak and small, and large quantities or large utensils are difficult to handle. Careful measuring, accuracy in following recipes, knowledge of the effect of heat on food materials, and the proper care of cooking utensils may be taught at this time.

The food course should not be rigid. The religious, financial, and social status of the children should be considered, and modification of the lessons made to meet existing conditions. If there is a probability that the girls will leave school before reaching the eighth grade, more cooking with recipes suitable for family use should be introduced in the sixth year, and more attention should be given to the selection of foods and the planning of meals.

All seventh, eighth, and ninth grade food preparation should be with family-quantity recipes and done under conditions similar to those which prevail within the home. When prepared in quantity, food may be disposed of in several ways. The school lunch, the teacher's daily lunch, food sales, the carrying home of the food—all offer means of reducing the cost of the class work and of increasing the value of the instruction. Uniformity in the method of the disposal of the products of classes in different parts of the city is not necessary. It is often well to combine two methods and thus increase the opportunities for varied experience in meal preparation. The work of the food class should never be determined by the needs of the school lunch nor by food sales.

In the seventh grade systematic instruction in personal hygiene and home sanitation should be begun and with these should be taught the management of the laundry and the care of the house. All art instruction should be correlated with the classes in clothing and household furnishing.

In the eighth year of school work the home economics should consist of instruction in foods and food preparation, in textiles and clothing, and in household marketing and accounting. In this grade should be given a simple course in emergency treatments and in the care of the sick.

The ninth grade, the first year of the high school in many places, should be a continuation of the work of the eighth grade and should comprise a survey of the essential facts relating to foods, to clothing, and to home management. This should complete the course in home economics which is required. Elective courses may be offered in all of the remaining years of the high school, and these may be shaped to offer training for wage-paying occupations.

#### THE TIME REQUIRED.

The preceding plan of home economics instruction makes necessary certain time allowances. For fifth and sixth grade pupils four 45-minute periods per week should be provided. These may be grouped into two quarter-day periods or reduced to a daily period of 35 minutes. In these grades the arrangement may be chosen which is most easily adjusted to the general class program. For the seventh and eighth grades from seven to nine 45-minute periods should be spent in the study of home-making subjects. This work may be arranged to occupy one morning and one afternoon per week and if properly correlated with language, arithmetic, geography, art, and history, will increase interest in these and make possible more rapid progress in all.

Two double periods daily is the time allowance needed for instruction in the ninth grade. This may be divided into two recitation, two study, and six laboratory periods. This work and the food classes of the seventh and eighth grades should be scheduled to come immediately before the lunch period in order that the food products can be utilized during that time.

Owing to the climatic condition existing in Columbia, it will probably be considered advisable to arrange the courses in home economics so that the food-preparation laboratory classes may be taught during November, December, January, February, and March, and the clothing courses be given during the early fall and late spring months. This arrangement necessitates little loss of room use and no disarrangement of schedules for either teacher or pupil if the teachers selected have the ability to teach all lines of home economics instead of special phases of the subject only.

SPECIAL WORK SHOULD BE PROVIDED FOR THE BLOSSOM STREET AND GRANBY SCHOOLS.

In the vicinity of the Blossom Street School there are numerous philanthropic and benevolent agencies which are giving instruction in home-making subjects. That these agencies are encouraging employed girls and women and schoolgirls to increase their efficiency in household affairs is a cause for much thankfulness. But it may well be questioned if any school community is ever justified in depending upon benevolent agencies to do that for which it is responsible.

In the Blossom Street and Granby School communities particularly, opportunities for home-economics instruction should be provided, for especially, for the children of mill workers are often older than the other children of their school grade. They have not always been fortunate in their country-school opportunities. They frequently come from homes where all the adult members leave early in the morning and return late at night, too fatigued to give attention to the children's school problems. Most of these children leave school as soon as they are old enough to enter remunerative employment. These conditions should be recognized and special facilities for the work of the character described provided in these localities.

This section of Columbia merits, for example, a special vocational school in which all children of 14 or over, without regard to school ranking, may receive intensive vocational training, home-making courses for the girls and manual arts and agricultural courses for the boys. Such vocational work should occupy one-half of each day's time for each student, and all other school instruction should be correlated with this. In other words, such studies should furnish motives for all the drawing, reading, arithmetic, geography, spelling, composition, and hygiene required of the pupils.

The home economics should closely articulate with the home life of the girls. Food prepared in classes should be used in the homes or at the noon lunches for the pupils in the school. The sewing should emphasize quick and efficient choice of material and of ready-made garments, the repair and remaking of clothing, and the selection, making, and care of household furnishings. The course in housekeeping should include practical instruction in all cleaning processes, including laundering, the keeping of accounts, the intelligent purchasing of household equipment and supplies, and very definite instruction in the elements of sanitation. Care of the sick and of children should likewise receive careful attention.

A well-organized two years' course of the type above described is needed in Columbia. The classes should be small. Women of special ability should be placed in charge, and only those in sympathy with the purpose of this course should be assigned to the teaching of the common-school branches.

## A TYPICAL VILLAGE HOUSE, FULLY EQUIPPED, IS NEEDED.

So pressing is the need for intensive courses in home making that Columbia should immediately arrange temporary quarters for instruction in these subjects. A building not greatly dissimilar to the average mill-village house would serve for several years. The sanitation of this house should be perfect and the furnishings of a type attainable by thrifty wage-earning people. Simplicity, sanitation, suitability, and beauty should be emphasized. The house should provide a living room, kitchen, screened porches, bedroom, and bathroom.

The classes assigned should not exceed 24, and for this number two teachers should be detailed to give instruction. The living room and bedroom should be used not only as rooms in which to practice housekeeping but also as sewing rooms and upon occasion as rooms in which to receive visitors. If possible, teachers should be employed who would be willing to live in the house and thus afford more practical instruction to the children in the care of the home.

Furthermore, this neighborhood offers a most excellent opportunity to establish and maintain a course in community cooking. The building now used by the Granby School would afford temporary quarters for a vocational course in cafeteria, restaurant, or community food preparation.

## COURSES FOR WOMEN WHO ARE EMPLOYED.

Every employed young woman needs to know some home economics. She should be able to select her own clothing with discrimination and to keep it in repair. This means that she must know fabrics, be trained in standards of good taste, appreciate the need of the clothing suitable to her occupation and income, and must have sufficient dexterity to make her plainer garments and to keep all of her clothing mended. As efficiency in any occupation is largely dependent on the good physical condition of the worker, the young woman employee should know not only clothing but foods, hygiene, and sanitation as well. To secure this knowledge she should rightfully turn to the public schools, and to meet her needs there should be maintained definite, well-organized, and progressive courses of instruction offered at times when it is convenient for her to attend.

At stated intervals special courses in home furnishing and home administration should be offered to young women who have recently married or who anticipate becoming home makers. No wholly satisfactory course can be administered if women of widely diverse experiences and needs are grouped together. Hence, courses for the actual housekeeper should be different from those given to the em-

played young woman, and it is probable that teachers with different experiences will be needed to teach these different groups of women.

The most satisfactory course for the women who are actually operating homes of their own is that known as the "short unit" course, each unit of which comprises 8 or 10 lessons. Each unit is independent of those which precede or follow it and is complete in itself, though narrowly limited in the topics treated. For instance, a unit course might be upon the topic of "children's clothing" or "spring millinery," or "quick breads," or "meat cookery."

Teachers with full work during the school day should not be permitted to teach these night or afternoon classes. Not only is the teacher overtaxed and her efficiency reduced, but also the type of teacher most desirable in one position may be far less adapted to meet the requirements of the other.

#### EQUIPMENT NEEDED FOR HOME ECONOMICS IN THE HIGH SCHOOL.

The reorganization of the high-school home economics course and the prescribing of home economics in the eighth and ninth years for all high-school girls will necessitate the rearrangement of the equipment now in use, the replacement of faulty and worn articles, and the installation of new materials. The present food laboratory, when completely equipped, will furnish opportunity for some of the classes in food preparation, and if rightly arranged may also serve as a place in which the materials for noon lunches can be prepared and from which a cafeteria or plate luncheon can be served. While such an arrangement for service is not ideal, it is economical and under existing conditions not objectionable. If properly maintained, such a meal becomes educative to the consumer as well as to those who assist in its preparation. Men as well as women need to know how to select foods intelligently and to understand relative food values and correct food combinations. These facts may be taught through well-prepared luncheons if a very few minutes are spent in directing the student's attention to such matters. A small kitchen should be arranged in the space now used as a storeroom, with the dining room properly furnished. This would make it possible to serve regular noon meals to the teachers of the building. This arrangement would also provide opportunity for the class, two girls at a time, to cook and serve meals prepared in family quantities.

A new food laboratory will become necessary because of the increase in the number of hours of food work recommended in the new course. It may be considered advantageous to equip the present sewing room for food classes and to change the clothing classes to more attractive rooms on one of the upper floors. The present sewing room is not well heated on cold days, a condition which is of little importance if used for food-preparation classes. A good high-

school sewing course will require a large, well-lighted room for classwork, more machines, better tables and chairs, additional lockers and closets, a fitting room, and suitable arrangements for pressing clothing. It is probable that a second room will be found necessary, especially if it is decided to use the high school as a center for other schools. However, if it is the policy of the school authorities to make the present high school a senior high school, then only one room will be needed for the clothing classes.

A girl's training in home making is not complete when she is able to select, purchase, prepare, and serve suitable foods and make for herself plain, economical, appropriate garments: Her high school should also equip her to select and to control intelligently the environment of her home. In order that the care of rooms may be taught, and also that simple home nursing practice may be given, a room, perhaps the teacher's rest room, should be placed at the service of the home economics department.

#### EQUIPMENT NEEDED FOR HOME ECONOMICS IN THE GRADE SCHOOLS.

In certain cities of the United States it has been deemed most economical to equip "centers" for home economics teaching and to have the children go from their respective schools to these special rooms for industrial class work. Other cities have equipped home economics rooms in each school building. The latter plan is unquestionably the best. The children are not upon the street between classes, nor are they exposed to disagreeable weather conditions with unnecessary frequency. When there is the necessity of changing the time schedule in one building, no conflicts occur with classes from other buildings, because all instruction is given under the same roof. The objections to this latter plan are, that the expense of equipment is somewhat increased; that in smaller schools the home economics classrooms remain unused during certain hours in the day; and that there are not enough children in one school to occupy the entire time of one home economics teacher; hence it becomes necessary that the teacher travel from one building to another, giving part of her time to each.

The only one of these objections which needs to be considered is that relating to partially unused room space. The interest on duplicated equipment represents so small an item that the objection in regard to this item merits little attention and can not be weighed against the loss of time and the increased hazards which result when children change from building to building. When school buildings are overcrowded, it seems unreasonable to have room space unoccupied for any considerable portion of the time. In all schools of the size of the McMaster, the Logan, and the Taylor School the home economics rooms will be in constant use, but at the Waverley School

and at the Shandon building the enrollment is not sufficient to fill these special rooms all the time. For part of the time, then, these could be used for other purposes.

If transfers from one building to another for home economics instruction be decided upon as most desirable for Columbia's present school condition, then all schedules should be so arranged that these transfers can be made at the usual recess periods, the child remaining one-quarter day or one-half day in home economics work. In many progressive city school systems, other supervised school activities are brought into the building which affords accommodations for home economics. Thus in one-quarter of a day a child may receive instruction in home economics and during another quarter of a day he may spend his time in writing, drawing, gymnasium work, and directed play.

Columbia has available basement rooms in the Logan and McMaster Schools, in which home economics equipment should be installed. It would not be unreasonable to use these two temporarily as centers for the children from the Taylor and the Waverley buildings. When a new building is constructed to meet the needs of the residents of the Waverley district, special provision should be made for accommodating the home economics classes. The Shandon School should have one room so equipped that it may serve for both the food and clothing classes. These children are too far from other schools to be sent to a "center." It is always most desirable to place the food laboratories on the top floor of the building, and in planning new buildings or in rearranging the old ones this fact should be borne in mind and this arrangement brought about if possible.

#### THE SITUATION IN THE NEGRO SCHOOLS.

Food preparation is given to the colored girls in the eighth, ninth, and tenth grades of the Howard School. Sewing is supposed to be taught to the seventh-grade girls, but because of the number of food-preparation classes it has been found impossible to give sewing this year. The course arranged by the teacher in food preparation was excellent, but its value was limited because of the very small quantities of food materials used. Efforts were made to emphasize the newer food-conservation ideas. Food preparation is taught in one of the basement rooms of the Howard School building. When outside water faucets freeze or are shut off all students at this building come into the cooking-class room for drinking water.

The floor of the laboratory is on the level with a very muddy yard, and conditions surrounding this building as well as all parts of the building itself are bad. The cooking-class room is kept immaculately clean and the walls have been whitewashed by the students. The cooking utensils are of good quality and well kept, and there has



been liberality in the purchase of these and other supplies for this work. No sewing machines have been secured for this school. It is unreasonable to expect these girls to learn to make and to care for their own garments when not supplied with and taught how to use a sewing machine. The students themselves in the food classes were clean, orderly, and well disciplined. They worked quietly and methodically. Where there has been time to teach sewing, the girls have made their cooking uniforms.

NEEDED REORGANIZATION OF HOME ECONOMICS FOR THE NEGROES.

The home-economics courses prepared for the negro girls should be intensely practical and required of all girls of 11 years and older, without regard to their school classifications. Children below the seventh grade in regular work should receive at least 60 minutes of daily instruction in home-making subjects. The first course should consist of work in sewing and housekeeping, especially stressing sanitary household practices and personal hygiene. During the second year of work the course should include the preparation of plain, wholesome food, simple machine sewing, and further instruction in housekeeping. During the third year of the home economics four quarter days or two half days per week should be devoted to the study of home making. At this time cooking with family-sized recipes should be given, together with a study of meal planning and meal service and frequent lessons on the growing of gardens, the care of poultry, and in the economical purchase of foods. The sewing in both the second and the third year should include garments for personal use, for household use, or for the use of other members of the girl's family. Emphasis should be placed on the selection of fabrics and on the repair of worn garments.

Home economics taught during the fourth and fifth years in this course—these grades being usually those of the eighth and ninth school years—should occupy two hours daily. The courses should include food preparation, garment making, lessons in laundering, household accounting, household sanitation, the care of children, and personal hygiene. The death rate among negro children is alarmingly high, and education is the only way to relieve this condition, since much sickness and many deaths are the result of ignorance and superstition.

A course in cooking with vocational aims should be established for colored boys. Such work has been organized at San Antonio, Tex., Los Angeles, Cal., and at other places. At these points boys are prepared for work with the Pullman Co. and for service in hotels and restaurants. Cooks are now needed at camps, on ships, and in cantonments, and the need will continue for a number of years. Were such a training course established, it would be neces-

sary to provide also a restaurant or lunch room in which to dispose of the products and give the necessary training in service.

Special vocational training for adult women is needed among the colored people of Columbia. Such work as that now done at Rock Hill might well be copied. Rock Hill night classes are maintained for maids, and cooks in service, and for women maintaining their own homes. Besides the above course, there should be a vocational home-making course for girls over 14 who manifestly will not continue in school more than one or two years. At least one-half of the school time should be devoted to home making, gardening, and poultrying. All other studies should be correlated with this work. Such a course would lead to more permanent and satisfactory service while wage earning, and later would result in better kept, more healthful, and more contented homes among the negro families in Columbia.

So long as there is a constant transfer from the negro home to the white employer's home, the sanitary and hygienic conditions of the one will be reflected in the health conditions of the other. It is poor economy to leave the negro untrained and in insanitary surroundings, when the child of the white home is cared for and, to a considerable extent, trained by a nurse from a negro cabin. Physically and economically, the retardation of the one race reacts disadvantageously on the conditions of the more fortunate group. Were there no other reasons than these, the negro boys and girls should be trained to become intelligent, diligent, clean, honest, self-supporting men and women, capable of enjoying the beauties of order, cleanliness, and simplicity. To this end, the home economics equipment should be taken out of its present quarters at the Howard School and placed under sanitary conditions.

Home-economics rooms should be provided in every negro school, and a small house and garden spot should be connected with each school in which the seventh, eighth, and ninth grade children are in attendance. These practice houses should not be better than the negro wage earner might aspire to occupy; nor should equipment and furnishing be better than thrifty negro families could afford to copy. The school home-economics furnishing should be adapted to the special needs of the negro children. It should aid in establishing standards for them and should not be so different in quality or in appearance that the school instruction becomes, in the minds of the students, entirely separated from the housekeeping operations within their homes.

#### SCHOOL LUNCHESES.

With the rearranged school schedule, elsewhere suggested, a short noon period in the high school will make necessary the service of a

lunch at the school. Under no circumstances should this lunch privilege be granted to outside concessionaires. Food sold to school children should be furnished at actual cost. It should be of excellent quality and of a type that will furnish proper nutriment in an attractive form. The school lunch becomes an important agency in teaching both boys and girls the intelligent selection and the economical purchase of cooked foods. An increasing number of Americans eat away from home one or more times a day. Usually the man or woman ordering cooked food knows little of its nutritional value; nor is he familiar with correct food combinations. It remains for the school to train in food selection, that adequate nourishment may be secured and that good digestion may be retained.

Because the school lunch affords opportunity to the home-economics pupils to cook in larger quantities without unduly increasing the expenses incident to the maintenance of the department, it is proper that the home-economics teachers have charge over the entire preparation and service of the lunches. It will be necessary to have a hired woman to wash dishes and cook those foods which must be served frequently, but this woman should be directed by a member of the home-economics department in order that the rules for good, healthful food preparation shall not be violated and that the laws of sanitation may be observed.

Columbia now has need of school lunches served at her grade buildings as well. Many of the children of the elementary grades rise before daylight and breakfast with their working fathers or mothers. Many of these breakfasts are served before 6 in the morning and some as early as 5. The parents of these children dine between 12 and 1 o'clock. Cold food which may or may not be reheated is left for the child at his home coming. It is probably true that a large number of the children take an apple, some cookies, or a banana, but under existing conditions such children are not satisfactorily nor sufficiently fed. The stomach of a child is smaller in proportion to its food needs than is that of an adult. It requires more frequent filling if it is to send into the blood enough nutriment to meet all the demands made upon a child's body by work, by play, and by growth. For a child to go from 6 in the morning until after 2 in the afternoon without substantial food is to leave the child listless and inattentive to lessons. Furthermore, the normal appetite is destroyed if the stomach is empty for too long a period.

Underfed children do not develop into strong and efficient children. Dr. Wood figures that 25 per cent of all American children suffer from malnutrition. This condition is not necessarily dependent upon a restricted family income, for ignorance of the food needs of growing children is the commonest cause. Of 21,000 retarded children studied in one school system, it was found that 54.6 per cent

were suffering from malnutrition. Since retardation and repetition of school work become the causes of the increased cost of instruction, it is apparent that children suffering from malnutrition are a drag and an expense upon the whole school organization. School feeding at noon is needed. It should not be established with the idea that it is exclusively for poor children. It should be for all children who wish to buy warm food. The food should be sold at cost. The preparation should be under sanitary conditions and properly controlled and directed. When children are hungry and can not buy, the school should, without humiliation to the child, supply tickets to the lunch, because, as has already been stated, it is an extravagance to retain children in school who are underfed.

#### SUPERVISION AND INSTRUCTION.

To organize and maintain the type of home-economics instruction described in the foregoing pages, a well-trained, efficient, and enthusiastic corps of teachers will be required. Responsibility and authority for home-economics teaching should be centered in one supervisor or director of home economics. The person chosen will need to be broadly educated and specially trained in home economics. She will need to have had teaching experience and ample knowledge of climatic, economic, and racial conditions as they exist in South Carolina. Not only should she supervise the work in the white schools, but she should also have authority over instruction of similar nature when given in negro schools. This supervisor or director should be paid an adequate salary and recognized as a consultant in the construction of new buildings and as the purchasing agent for her own department and as the one having control of any or of all lunchroom arrangements hereafter provided for in the city schools of Columbia. The supervisor should also be granted the privilege of nominating her subordinates and should not be required to accept any candidate who does not meet her requirements.

#### PROGRESSIVE DEVELOPMENT OF HOME ECONOMICS.

To inaugurate the entire scheme of home-economics teaching as herein suggested would entail a sudden and burdensome expense upon the public-school authorities; hence the following suggestions are offered.

1. During the first year after the presentation of this report, re-organize the high-school work in home economics, and properly equip the rooms now in use. Suggestions for these needed changes are made elsewhere.

2. Require a new course for all high-school girls.

3. Bring all seventh-grade girls from the Taylor, Logan, McMaster, and Shandon schools to the present high-school laboratories for their classes in home economics.

4. Establish the special vocational home-economics work in the Blossom Street and Granby School community immediately.

5. Establish sewing under the room teacher's instruction in all fifth and sixth grades. Place the supervision of this work under the direction of the supervisor of home economics, increasing the pay of teachers who give this instruction to compensate them for the time which is spent in preparation for teaching and in attending meetings called by the supervisor of home economics.

During the second year of the administration of this new plan centers can be opened, and by the third year the complete adjustment should have been accomplished. There are now two teachers employed to teach home economics in the white schools; when the work is reorganized there will need to be, during the first year, one supervisor, three regular teachers, and one special teacher for work among adult women and employed girls. The number will increase as the work develops in other centers and reaches down into the lower grades. It is not desirable that room teachers continue to teach sewing after the first or second year. They can not be expected to desire this added burden; nor may it be assumed that all will be in sympathy with the movement.

When home economics has become well established and maintained in the schools of Columbia the life of the city will be enriched by many young women who, when assuming the responsibility of administering a home, will bring to their tasks an interest and an understanding of the obligations devolving upon them. They will not be in all ways expert, but they will have that intelligence in matters relating to their homes that will enable them to seek further enlightenment and to make use of the accumulated experiences of women as set forth in the better books treating of home economics.

The time, too, when such courses are inaugurated will come when the school children of Columbia will exhibit a finer degree of physical well being, when merchants and tradesmen will recognize a more discriminating and appreciative purchasing public, and when the employer of woman labor will realize that his employee is a better employee because she is healthier and more capable of securing the maximum of comfort from her use of the contents of her weekly pay envelope. Increased economic pressure will make satisfactory management and expenditures of home incomes more difficult each year. Greater efficiency will be needed by woman. Many heretofore able to command the help of servants will be forced to perform the tasks of their own households and to multiply their own

ability by the use of labor-saving devices. The maintenance of health will become more difficult as the density of population increases and as each household becomes more endangered by the conditions existing in near-by homes. For all of these contingencies must the young woman of the present be made ready if Columbia is to continue to be a rich, contented, beautiful, and healthful city of homes.

## SUMMARY.

1. Organize required courses in home economics and mechanical arts for all regular students in grades 5 to 9, inclusive, and for grade 4 in schools where many students are over age.

2. Establish special vocational courses in connection with the Blossom Street School for all children over 14 years of age who will probably leave school without entering the eighth grade.

3. Offer selective courses in home economics, agriculture, and manual arts to advanced high-school students.

4. Maintain classes in home making for actual home makers and for employed girls and women.

5. Adjust the problems used in the lessons to meet the social, financial, or religious status of students.

6. Have usable articles made in all sewing classes and family-sized recipes used in all classes above the sixth grade.

7. Serve at school luncheons or teachers' lunches or sell the food which is cooked by the classes.

8. Maintain a school lunch at the high school, the Blossom Street School, and when need arises at other schools in the city.

9. Place the responsibility for the school lunch in the hands of the supervisor of home economics.

10. Improve and enlarge the equipment and room space in the high school now given to home economics.

11. Equip "centers" at certain grade buildings, but plan to have ultimately a full equipment in each school.

12. In the Blossom Street School district equip a village house as a practice house for home-making instruction.

13. Limit the number of students in classes and classify carefully.

14. Require home economics of all negro girls of 11 years of age and above and make the courses intensely practical, seeking especially to establish standards that shall react beneficially upon the homes of the children.

15. Suitable rooms in every negro school in which are to be found the seventh, eighth, or ninth grades should be provided and fully equipped.

16. Establish a department of home economics, including all instruction in home-making subjects, in all schools.

17. Employ one supervisor for all home economics teaching and an adequate, well-prepared, and well-paid teaching corps.

18. Encourage study and advanced work among these teachers.

19. Since all changes can not be made in one year, it is suggested that room teachers instruct the fifth and sixth grade children in sewing for the first year and the fifth-grade children during the second year, and by the third year have the home economics corps increased to a number sufficient to give all necessary instruction. The same arrangement should also be worked out for the mechanic arts.

20. Because the expense of inaugurating all these changes must be considered, it is further suggested that needed improvements be first made at the high school and at the Blossom Street School, to be followed by improvements at the Logan and McMaster Schools and later at all the other schools of the city.

## V.—INSUFFICIENT MAINTENANCE HAS RENDERED THE SUPERVISION INADEQUATE.

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### THE SUPERVISORIAL STAFF.

In any enterprise where results depend upon collective effort, as in a public-school system, confusion, loss of time and of effort, and general wastage on all sides can be avoided only by a very careful coordination of the work of every individual in the corps. Efficiency can be obtained only through teamwork exercised in every part of the many-sided activities of the system. And teamwork can be secured in no other way than through the personal supervision of a leader or leaders who endeavor to unify the work of all in order that a definite aim may be reached or an adopted plan carried into effect. In a school system the responsibility falls directly upon the superintendent and his corps of supervisors and assistants expressly selected for their ability as leaders and for their knowledge of details. In most cities the size of Columbia there is a supervisor of the primary grades; either a supervisor of intermediate grades or this work is done by the principals of the several schools; a supervisor of industrial work for the system throughout; a supervisor of music throughout; a supervisor of penmanship throughout; one for drawing and art throughout; and then heads of high-school departments, who are looked upon as responsible, in the high-school corps, for the planning and teaching of their respective subjects and whose ability and responsibility are recognized in the salary schedule.

These supervisors, acting with the superintendent as their leader and with the principals in the several schools, constitute the supervisory body whose duty it is to lay out plans in discussion with the teachers, and through cooperating with the latter gradually bring about a well-knit together and thoroughly coordinated school system which shall increasingly secure higher standards of efficiency in their respective departments.

In respect to such a supervisorial staff Columbia has been unfortunate, for it has been impossible for the board of education to provide the necessary funds. A supervisor of all of the grades and a supervisor of music is as far as the board has gone in this important direction. So these two, with the superintendent, give the only supervision which the teachers obtain as the schools are now organized.



It is clearly impossible for these three to provide the supervision which the system needs and which the preceding paragraph suggests.

The burden of putting into execution the building program, covering the past 12 years, has fallen upon the superintendent. He has studied most thoroughly the problem of the modern school building; he has planned the structures, supervised the architects, and watched the progress of each building in every detail. Besides this, as secretary of the board, and its treasurer as well, he has verified every bill of expenditure and drawn every check which has been issued. He has handled all the correspondence involved and written all the letters which have been sent out. He has kept an itemized record of all receipts and of all expenditures reaching back over his period of incumbency, and the records are models of accuracy and clearness. All this mass of necessary detail he has attended to personally; for not until three years ago was the board able to provide him with an office assistant. A heavy task has been his, and the tangible results expressed in modern buildings of excellent appearance are a tribute to his energy, good judgment, and painstaking effort.

#### THE PRINCIPALS DO NOT SUPERVISE.

Obviously, it has been impossible for the superintendent during this period of building activity to give his attention to the professional side of the work of the schools except in the more general features. He has not had the time personally to supply that coordinating leadership in the purely instructional and educational side of the school's activities which good teamwork in a modern school system requires. Ordinarily this need could be supplied to a degree, though not wholly, by holding the principals responsible in their several buildings for the quality of the teaching therein and expecting them to supply in their own teaching corps the leadership needed. But here, again, funds have been so inadequate that the principals of even the largest buildings have had to teach full time, consequently their work as supervisors has been limited to the care of the building and grounds and to matters of disciplinary character. Very recently some relief has been provided, for the principals of the three largest elementary schools and the principal of the high school have been granted the following free time through the employment of substitute teachers for part time:

Principal of the McMaster School	-----	From 9 to 11.30 a. m.
Principal of the Logan School	-----	Full time.
Principal of the Taylor School	-----	From 9 to 11.30 a. m.
Principal of the high school	-----	Full time.

It should be added, however, that the rules and regulations of the board which define specifically the duties of principals have not yet

been amended to give them any authority in their schools in matters of an instructional nature, so that as yet no use has been made of the principals in this connection.

#### THE DUTIES OF THE ELEMENTARY SCHOOL SUPERVISOR.

In practice, then, the only detailed supervision of professional character which the teachers are getting is that afforded by the elementary school supervisor and by the supervisor of music, whose time is given to her subject alone. There are 71 teachers of elementary grade in the white schools. Even though the supervisor should spend her entire time in schoolroom visitation, it is clear that she could give but a short period to each teacher at infrequent intervals only. As it is, however, in addition to her supervisory duties, she has charge of issuing the supplies to the several schools. This, together with necessary office work, requires considerable time and attention—about one-fifth of her time, it is estimated—and lessens by so much the all too limited opportunity she otherwise would have. Much can be and is being done toward unifying the work through the grade meetings which the supervisor holds (the schedule calls for a monthly meeting with each grade) and through the bimonthly progress reports which each teacher is required to make in written form. However, the suggestions brought out in the meetings and the proposals elicited by the reports should be closely and personally followed up in the several classrooms if coordinated results of a high order are to be secured. As the matter now stands, the supervisor can spend but one day twice per month in each building in this follow-up work. Obviously, during a single five-hour teaching session she can observe the work of but few individuals; so in the larger schools, as it works out practically, there are many teachers whom the supervisor visits infrequently and but for a few minutes at a time only.

Other elements of serious consequence making for disintegration are the teachers who enter the department in numbers each year unfamiliar with the work of the system and the corps of substitute teachers, which is shifting and impermanent.

The new teachers should be taken at the beginning of their period of service by the supervisor for special training and instruction in the important features of the system; and then, for a time, at least, their work in the classroom should be very closely followed, in order that as quickly as possible they may be made able to contribute their part to good teamwork. In Columbia these new teachers have, to a degree, to find their places as best they can, for it is impossible for the one supervisor, try as hard as she may, to give them as much special attention as they need.

## THE PROBLEM OF SUBSTITUTE TEACHERS.

A more serious problem than that of the "new" teacher, however, is found in the character of the corps of teachers who are called on from time to time to substitute for those teachers who, for any reason, are kept away from their classes. In many instances the absence of the regular teacher is but for a day or two; again, in instances, it may be for a week or indeed for several weeks. Again, a given substitute may be needed one day in a first grade, the next day she may be sent to a sixth grade, and the third day to some other grade. Then, too, one day she is sent to teach a class perhaps notoriously difficult to interest and control, while the next day her lines may fall in a more pleasant place. Furthermore, in most instances the need is not known until just a few minutes before the day's session begins, scarce affording time, frequently, for the substitute to reach the post assigned her. The consequence is that she has had no time to make that special preparation for the day's work which the regular teacher always makes if she is in earnest and which is doubly necessary for a substitute if she is to succeed in doing creditable work.

Clearly, then, the most difficult position in the entire teaching corps of any city is that of the substitute teacher. She needs versatility, adaptability, intimate knowledge of the entire range of school work, poise, disciplinary ability, and all the other qualities of a good teacher to an even greater degree than that required of the regular teacher, who has the same group of children for a year or a term at least, and becomes familiar thereby with the idiosyncrasies of each individual. In practice, most school systems employ as substitute teachers almost all who come along—green girls, broken-down old ladies, impecunious wives—anybody, in fact, who can be gotten hold of quickly when needed, and no questions are asked—not many, anyway.

If sufficient remuneration is paid to make the work an inducement, usually a few people of ability can be gotten together who with sufficient training and close supervision can be brought to a point where at least it is better to assign them to a class than to dismiss the children, but a better plan is that now adopted in a few progressive and far-sighted systems.

Recognizing that such work demands teaching skill of the highest order, the school boards select a few of the very best teachers of the regular corps, the number depending upon the size of the system, relieve them entirely of assignment to a given class and thereby secure a "flying corps" to be quickly shifted from point to point as the emergency arises. Such teachers, instead of being paid less than regular teachers, are paid considerably more in recognition of their

superior ability and the difficulty of the work. As they are employed on full time, when no substituting is called for, they are sent into various schools to give observation lessons for weak teachers or for teachers who are new to the work and need the help which the supervisors have no time to give. Again, they are assigned to a given grade for two or three days, giving the regular teacher a much-needed opportunity of visiting other classes in her own or in neighboring cities. Such teachers become in reality the teaching assistants of the supervisor, and in those cities which have tried the plan are considered indispensable adjuncts of the supervisory staff.

In Columbia, however, the funds are not sufficient to secure adequate supervision in any way. In consequence, one observes a lack of coordination of effort and of plan in the several schools of the system which seriously lessens the efficiency of the work as a whole.

The result which comes from lack of proper coordination is well illustrated by the way the plan of pupil promotion operates; by the teaching activities of the classrooms; and by the achievement of the pupils as shown by certain standard educational measurement tests which were given. These three phases of the work are of sufficient consequence to justify a detailed discussion.

#### 1. THE PLAN OF PUPIL PROMOTION.

The plan of promotion which was adopted when the school system of Columbia was organized in 1883 has been retained without essential change. As described in the superintendent's First Annual Report, the plan called for annual promotions, to be based on a five-days' written examination to be held during the week immediately preceding the last week of the school year, followed by a public oral examination on two days of the final week. In addition, bimonthly written examinations, on prescribed days, throughout the year were required of all grades above the second. The results of the monthly and yearly examinations were to be averaged separately, each counting half in determining the pupil's final score, which was registered on a scale of 100, with 65 designated as the passing average and 55 a minimum for any given subject. In 1913-14 came semiannual promotions throughout, and in 1915 promotion by subject was introduced in the high school. About the same time the report cards of the elementary grades were changed whereby grades in term of per cents were expressed as letters except in the high school, where the percentile system of scholarship grading is still employed. However, as it was at the beginning, the essence of the plan is still the formal written examination at the end of each term, coupled with tests held at intervals throughout.

A summary of the results obtained under the operation of the plan, in respect to the promotion and failure of pupils in the elementary grades for the term closing June, 1917, follows:

*Promotions and failures distributed by grades and schools. White children, June, 1917.*

## FIRST GRADE.

Schools.	Total number of pupils remaining to end of term.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Logan School.....	109	67	61.5	17	15.6	25	22.9
McMaster.....	69	60	86.9	4	5.7	5	7.3
Taylor.....	71	55	77.4	8	11.3	8	11.3
Shandon.....	28	20	71.4	6	21.4	2	7.2
Waverley.....	31	21	67.7	7	22.6	3	9.7
Blossom Street.....	59	35	59.3	18	30.5	6	10.2
Granby.....	33	27	81.8	1	3.0	5	15.2
Total.....	400	285	71.2	61	15.3	54	13.5

## SECOND GRADE.

Logan.....	140	101	72.2	23	16.4	16	11.4
McMaster.....	78	55	70.5	16	20.5	7	9.0
Taylor.....	72	53	73.6	7	9.7	12	16.7
Shandon.....	42	31	73.8	7	16.6	4	9.6
Waverley.....	27	25	92.6	2	7.4	0	.0
Blossom Street.....	35	22	62.9	8	22.9	5	14.2
Granby.....	43	37	86.0	4	9.3	2	4.7
Total.....	437	324	74.2	67	15.3	46	10.5

## THIRD GRADE.

Logan.....	109	90	82.6	10	9.2	9	8.2
McMaster.....	84	63	75.0	9	10.7	12	14.3
Taylor.....	86	61	70.9	20	23.3	5	5.8
Shandon.....	45	36	80.0	5	11.1	4	8.9
Waverley.....	33	21	63.6	8	24.2	4	12.2
Blossom Street.....	42	22	52.4	9	21.4	11	26.2
Granby.....	11	10	90.9	0	.0	1	9.1
Total.....	410	303	73.9	61	14.9	46	11.2

## FOURTH GRADE.

Logan.....	157	131	83.4	13	8.3	13	8.3
McMaster.....	85	64	75.3	12	14.1	9	10.6
Taylor.....	74	57	77.0	11	14.9	6	8.1
Shandon.....	39	28	71.8	9	23.0	2	5.2
Waverley.....	34	29	85.3	4	11.7	1	3.0
Blossom Street.....	51	38	74.5	6	11.8	7	13.1
Total.....	440	347	78.8	55	12.5	38	8.7

## FIFTH GRADE.

Logan.....	74	66	89.3	5	6.7	3	4.0
McMaster.....	79	67	84.8	11	14.0	1	1.2
Taylor.....	75	47	62.6	18	24.0	10	13.4
Shandon.....	25	20	80.0	1	4.0	4	16.0
Waverley.....	11	11	100.0	0	.0	0	.0
Blossom Street.....	17	12	70.6	2	11.7	3	17.7
Total.....	281	223	79.3	37	13.2	21	7.5

Promotions and failures distributed by grades and schools. White children,  
June, 1917—Continued.

## SIXTH GRADE.

Schools.	Total number of pupils remaining to end of term.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Logan.....	56	36	64.3	11	19.7	9	16.0
McMaster.....	67	47	70.1	13	19.4	7	10.5
Taylor.....	65	37	57.0	9	13.8	19	29.2
Shandon.....	25	23	92.0	0	.0	2	8.0
Waverley.....	14	14	100.0	0	.0	0	.0
Blossom Street.....	7	7	100.0	0	.0	0	.0
Total.....	234	164	70.0	33	14.1	37	15.9

## SEVENTH GRADE.

Logan.....	77	50	64.9	15	19.5	12	15.6
McMaster.....	72	43	59.7	21	29.1	8	11.2
Taylor.....	29	25	86.2	0	.0	4	13.8
Shandon.....	18	13	72.2	4	22.3	1	5.5
Waverley.....	26	20	77.0	4	15.3	2	7.7
Blossom Street.....							
Total.....	222	151	68	44	20.0	27	12.0

## Promotions and failures distributed by grades and schools. Negro children. June, 1917.

## FIRST GRADE.

	Total number of pupils.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Booker T. Washington.....	248	207	83.4	7	2.9	34	13.7
Howard.....	285	198	69.5	29	10.2	58	20.3
Total.....	533	405	75.9	36	6.8	92	17.3

## SECOND GRADE.

Booker T. Washington.....	122	95	77.9	12	10.0	15	12.1
Howard.....	122	97	79.6	4	3.3	21	17.1
Total.....	244	192	78.7	16	6.5	36	14.8

## THIRD GRADE.

Booker T. Washington.....	81	62	76.5	3	3.7	16	19.8
Howard.....	117	84	71.8	10	8.6	23	19.6
Total.....	198	146	73.7	13	6.7	39	19.6

## FOURTH GRADE.

Booker T. Washington.....	76	59	77.6	3	3.9	14	18.5
Howard.....	103	91	88.4	8	7.7	4	3.9
Total.....	179	150	83.9	11	6.1	18	10.0

*Promotions and failures distributed by grades and schools. Negro children,  
June, 1917—Continued.*

## FIFTH GRADE.

	Total number of pupils.	Promoted.		Promoted on trial.		Failed.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Booker T. Washington.....	43	33	76.7	1	2.4	9	20.9
Howard.....	62	51	82.3	5	8.0	6	9.7
Total.....	105	84	80.0	6	5.7	15	14.3

## SIXTH GRADE.

Booker T. Washington.....	32	18	56.3	5	15.6	9	28.1
Howard.....	66	58	88.0	3	4.5	5	7.5
Total.....	98	76	77.6	8	8.1	14	14.3

## SEVENTH GRADE.

Booker T. Washington.....	18	13	72.3	1	5.5	4	22.2
Howard.....	54	50	92.6	0	0	4	7.4
Total.....	72	63	87.5	1	1.4	8	11.1

## NO UNIFORM PROMOTION BASIS IN EVIDENCE.

The striking thing to be observed in these summaries of the proportion falling into the three groups, "Promoted," "Promoted on trial," and "Failed," is the complete lack of the evidence of any standardized basis of promotion and failure within the limits of a given grade considered for all schools or within all the grades of a single school. Some schools give a clear promotion to 87 per cent of their first-grade pupils, while others promote only 60 per cent; in second grades the promotions range from 62.9 per cent in the Blossom Street School to 92.6 per cent in the Waverley; in third grades the range of promotion is from 52.4 per cent in the Blossom Street School to 90 per cent in the Granby; in the fourth grades the variation among schools is not so great, the range being from 71.8 per cent in the Shandon to 85.3 per cent in the Waverley; in the fifth grades the Taylor School promotes 62.6 per cent, while the Waverley promotes 100 per cent; in the sixth grades the range of variation is from 57 per cent in the Taylor to 100 per cent in both the Blossom Street and Waverley; while in the seventh grades we find the lowest percentage of clear promotions to be at the McMaster, with 59.7 per cent, while the highest is at the Taylor, with 86.2 per cent.

Again, taking the variations of standard within each school we find the same lack of uniformity. In the Logan School the range in clear promotions is from 61.5 per cent in the first grades to 89.3 per cent in the fifth grades; in the McMaster the range is from 59.7 per cent in the seventh grade to 86.9 per cent in the first grades; in

the Taylor it is from 57 per cent in the sixth grades to 86.2 per cent in the seventh; in the Shandon the lowest is 71.4 per cent in the first grade, and the highest 92 per cent in the sixth grade; with the Waverley the third grade is the lowest, 63.6 per cent, while 100 per cent were promoted in both the fifth and sixth grades; the Blossom Street School promoted 52.4 per cent of the third grade and 100 per cent of the sixth grade; while in the Granby School, the mill school where one would expect a large percentage of retardation in comparison with other schools, the range of promotion was between 81.8 per cent in the first grades and 90.9 per cent in the third grade. Were the records of individual classes taken instead of the grades as wholes the variations would have been even greater.

In the negro schools the same lack of any apparent norm of promotion is observable. The lowest percentage of straight promotion is 56.3 per cent, in the sixth grade of the Booker T. Washington School, while the highest is 92.6 per cent, in the seventh grade of the Howard School. A good illustration of the lack of uniform standards of promotion is found in the percentage of failures in the fourth, fifth, sixth, and seventh grades of these negro schools. In the fourth grade of the Booker T. Washington School failures were 18.5 per cent of the pupils, while in the Howard School the failures in the same grade were but 3.9 per cent of those remaining to the end of the term. In the fifth grade the failures were 20.9 per cent in the one school and 9.7 per cent in the other. In the sixth grade the percentages are 28.1 and 7.5, respectively, while in the seventh grade 22.2 per cent failed in the Booker T. Washington and but 7.4 per cent in the Howard.

It must be remembered, moreover, that these percentages are based on the number of pupils who, having enrolled in the school, remained in attendance throughout the entire term. How many became discouraged with their work during the term and dropped out on that account is not known. That the total loss during the term, from whatever cause, was very heavy, nearly one-third of the enrollment, the following table, compiled from the records of the negro schools, will show:

*Loss in the negro schools during one term.*

Grades and schools.	Total enrollment.			Withdrawals.			Per cent loss.
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	
First grade:							
Booker T. Washington.....	190	210	400	74	78	152	38.0
Howard.....	200	187	387	52	50	102	26.3
Second grade:							
Booker T. Washington.....	80	93	173	27	24	51	30.0
Howard.....	94	103	197	31	44	75	38.0
Third grade:							
Booker T. Washington.....	46	88	132	20	31	51	38.0
Howard.....	63	95	158	23	18	41	26.0



*Loss in the negro schools during one term—Continued.*

Grades and schools.	Total enrollment.			Withdrawals.			Per cent loss.
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	
Fourth grade:							
Booker T. Washington.....	30	79	109	11	22	33	30.2
Howard.....	50	83	133	9	21	30	22.5
Fifth grade:							
Booker T. Washington.....	22	37	59	6	10	16	27.1
Howard.....	36	46	82	8	12	20	24.4
Sixth grade:							
Booker T. Washington.....	14	26	40	4	4	8	20.0
Howard.....	24	56	80	7	7	14	17.7
Seventh grade:							
Booker T. Washington.....	8	19	27	2	7	9	33.3
Howard.....	19	54	73	8	11	19	26.1
Total.....	876	1,174	2,050	282	339	621	30.3

## THE SITUATION IN THE HIGH SCHOOL.

The lack of uniformity of grading, apparent in the elementary schools, is no less in evidence in the high schools, where the percentage of failures runs higher than in the grades. A study of the marks given for the term ending June, 1917, to a class of the first two years (eighth and ninth grades) of the high school and for the four subjects which most of the pupils were taking was made. There were so few pupils enrolled in the two upper years, and they were scattered among so many subjects, that it seemed unprofitable to carry the study further, although, doubtless, the showing would have been better. The following table shows the proportion who "passed" and the proportion who "failed" in algebra, Latin, English, and history:

*Promotions and failures in four high-school subjects.*

Classes.	Algebra.			Latin.			English.			History.		
	Total number pupils.	Total promoted.	Per cent promoted.	Total number pupils.	Total promoted.	Per cent promoted.	Total number pupils.	Total promoted.	Per cent promoted.	Total number pupils.	Total promoted.	Per cent promoted.
1A1.....	32	25	77.1	27	24	88.8	33	21	63.6	30	22	73.3
1A2.....	29	24	82.8	28	24	85.7	28	18	64.3	27	22	81.5
1A3.....							30	20	66.6	30	3	10.0
1B1.....	33	24	72.2	29	21	72.4	34	25	73.5	34	29	85.3
1B2.....	35	27	77.1	32	28	87.5	36	30	83.3	36	32	88.8
1B3.....							31	22	70.9	31	21	70.0
2A1.....	33	20	60.6	27	12	44.4	33	24	72.7	33	24	72.7
2A2.....	30	25	83.3	26	17	65.4	32	26	81.2	31	24	77.4
2A3.....							14	10	71.4			
2B1.....	24	23	95.8	24	15	62.5	26	21	80.7		19	70.4
2B2.....							7	7	100.0			
Total.....	216	168	77.7	193	141	73.0	304	224	73.6	279	196	70.2
Median of classes.....			77.1			72.4			72.7			73.3

That is to say, in algebra the range of promotions among the classes considered as units was from 60.6 per cent in 2A1 to 95.8 per cent in 2B1, with a median of 77.1 per cent in 1B2. In Latin the

lowest percentage of promotion was 44.4 per cent in 2A1, and the highest 88.8 per cent in 1A1, with a median of 72.4 per cent in 1B1. In English the variation was between 63.6 per cent in the 1A1 to 100 per cent in 2B2, with a median of 72.7 per cent in the 2A1. In history, in one class, the 1A3, only 10 per cent were promoted, while in the 1B2, 88.8 per cent were promoted. The median class was the 1A1, with 73.3 per cent passing.

If the preceding table be carelessly read, it might be inferred that from 70.2 per cent to 77.7 per cent of the pupils enrolled in the classes of the first two years of the high-school course are promoted without failure, but a moment's thought will make clear that that would be true only in the event that the same pupil fails in all four subjects. In fact, one pupil may fail in algebra and pass in the other subjects, and another pupil may fail in Latin, and so on. Another table, then, is needed to show just what the situation is as it relates to the individuals of the classes and that is a table showing how many in each class failed in one or more subjects in comparison with the total class enrollment. This follows, the data for which were taken direct from the teachers' registers:

*Percentage of failures in four high-school subjects.*

Classes.	Total number of pupils receiving marks in the four subjects.	Number failing in one or more subjects.	Percentage failing in one or more subjects.	Percentage passing in all subjects.
1A1.....	33	15	45.4	54.6
1A2.....	29	12	41.4	58.6
1A3.....	30	28	93.3	6.7
1B1.....	34	16	47.0	53.0
1B2.....	36	11	30.6	69.4
1B3.....	31	12	38.7	61.3
2A1.....	33	28	84.8	15.2
2A2.....	32	17	53.1	46.9
2A3.....	14	4	28.5	71.5
2B1.....	27	14	51.8	48.2
Total.....	299	157	52.5	47.5

Of the total of 157 who failed in one or more subjects, 3 failed in all four; 19 failed in three each; 65 failed in two each; while the remaining 70 failed in one of the four subjects. This discloses a startling situation, for the tabulation shows that more than half (52.5 per cent, to be exact) of those remaining throughout the term in the first two years of the high-school course are failing in one or more of their studies and this does not take into account those who became discouraged and quit. This is rendered still more serious by the record in two of the classes, the 1A3 and the 2A1 (see the preceding table). In the first of these, a class comprising 16 boys and 14 girls, all the girls failed in at least one subject, while only 2 of the

boys escaped. That is to say, only 2 out of the total of 30 did work sufficiently creditable to pass them in all four subjects. In the 2A1 the situation is a little better, but not much. This class comprised 22 boys and 11 girls who received marks at the end of the term. All failed in at least one subject except 1 girl and 4 boys. The girl missed failing in one of her subjects by one credit only; while had 3 of the 4 boys had five credits less each, they, too, would have failed. There was just one pupil in the class whose term marks did not fall below 70 in any one subject.

In attempting to account for this surprising situation the explanation, doubtless, which first occurs to one as a possibility is that of irregularity of attendance. It stands to reason that a pupil who, for whatever reason, is absent a great deal from his recitations can not expect to fare as well in terms of school credits as one who is always in his place, and therefore who gets all the benefit of the course of instruction. Indeed; it is clear that too great a degree of irregularity in attendance, varying with the individual pupil, will naturally end in a grade of work so poor in quality as to justify the teacher in asking him to repeat the course during the following term. In seeking a reason, then, for the undue proportion of failure in the high school, the facts regarding the attendance of those who failed were examined. The results of this study of the relation of failure to attendance are given in the table which follows:

*Relation of failures in algebra, English, history, and Latin to irregular attendance, high school, June, 1917.*

Classes.	Number of pupils receiving marks.	Number failing in one or more of four subjects.	Class average for pupils—days absent during term of 88 days.	Attendance record of those failing.		
				Number having no absences.	Number having fewer than class average.	Number having more than class average.
1A1.....	33	15	6.2	1	10	4
1A2.....	29	12	9.3	2	7	3
1A3.....	30	28	8.5	4	21	3
1B1.....	34	16	4.2	3	10	3
1B2.....	36	11	5.5	4	2	5
1B3.....	31	12	9.9	4	4	4
2A1.....	33	28	6.5	8	11	9
2A2.....	32	17	7.2	7	8	2
2A3.....	14	4	5.6	1	1	2
2B1.....	27	14	7.0	3	11	0
Total.....	299	157	6.9	37	85	35

These facts were come at in this way: The total number of days' attendance during the term for a given class was divided by the number in the class who remained in school throughout the term. This gave the average number of days attended by each member of the class. The difference between this average and 88, the number

of days school was in session during the term ending June, 1917, was taken. This gave the average number of days each member of the class was absent. (See table, column No. 3.) Then the attendance record of each pupil who failed was compared with the absence average for his class and the results distributed into three groups: (1) The number having no absences, (2) the number having fewer absences than the average for his class, (3) the number having more absences than the class average. The last three columns of the preceding table show these distributions for the classes considered. The totals show that, of the 157 failures, 37 of them had no absences against them at all; 122 had fewer absences than the average of their respective classes; while only 35, less than a fourth, had an absence record which exceeded that of the average of their several classes.

Obviously, then, for 77.7 per cent of this group of failures, whatever may be said of the remainder, their scholarship record can not be laid, justly, at the door of irregularity of attendance. The explanation must be sought elsewhere and can be found, it is believed, no where but in the lack of teamwork among the teachers leading to greater unanimity as to a reasonable standard to which pupils should be held and by which they are judged, for it is inconceivable, of course, that there is any such variation in the actual ability of the children of Columbia as is disclosed by the foregoing study of promotion records.

#### THE INACCURACY OF TEACHERS' MARKS.

Children are pretty much the same the world over in respect to their reaction to school instruction. That is to say, the average of a group in one part of the country will measure up pretty close to the average of a group of the same age in any other part of the country. The variation comes, not among the children, but among the teachers, in their estimates of what the pupils have accomplished. A number of studies have been made during the last few years to determine the accuracy and reliability of the marks which teachers give to pupils. An interesting summary of several of these investigations is to be found in Monroe, DeVoss, and Kelly: "Educational Test and Measurements." Houghton Mifflin Co., 1917.

Carter,<sup>1</sup> for example, in 1911, took the marks of the eighth-grade pupils who had entered high school from three elementary schools and compared them with the marks received in the high school. He reasoned that, if the marks were an accurate rating of the pupils' ability, in general the same relative position obtained in the elementary schools would be maintained in the high school. He found, however, that there was a complete reversal from what one would

<sup>1</sup> Carter, R. E. Correlation of Elementary Schools and High Schools. In *Elementary School Teacher*, vol. 12, pp. 109-118.

expect, for the pupils coming in from the school which gave the lowest marks, outstripped the others in maintaining or increasing their original rank.

Kelly,<sup>1</sup> in 1913, made a similar study of the marks of sixth-grade pupils coming into a common departmental school for seventh-grade work from four ward schools. To quote his conclusion:

This means that for work which the teacher in school C (one of the ward schools) would give a mark of "G" (good) in language, penmanship, or history, the teacher in school D (another ward school) would give less than a mark of "F" (fair).

Starch and Elliott,<sup>2</sup> to mention but one other of many investigations of the accuracy of teachers' markings, made a facsimile reproduction of an examination paper handed in by a pupil in plane geometry and sent a copy to the teachers of geometry of all the high schools included in the North Central Association of Colleges and Secondary Schools, requesting that they mark the paper on a scale of 100 per cent. One hundred and sixteen teachers complied, with the following results: Two of the ratings were above 90; while one was below 30; 20 were 80 or above; while 20 others were below 60; 47 teachers gave a passing mark or above, while 69 teachers gave a mark which would have failed the writer of the paper.

These and other investigations of similar character point inevitably to the conclusion that teachers' marks, as determined in most schools, are inaccurate and unreliable records of the performance, or ability, or accomplishment of pupils, and that the faith which both pupils and teachers have placed in traditional systems of marking is a blind, unreasoning one. Is a teacher rating merely the performance of a pupil in the particular examination set? Or does she take into account the pupil's ability? Or again is it his accomplishment extended over a period of considerable time that she is rating? Others, again, may have in mind the pupil's effort. Still others may try to show the degree of improvement the pupil has made within a given period. The question: "What do we mark?" was put by one superintendent to his teachers,<sup>3</sup> and the following were some of the answers he got: "Improvement," "ability," "serious purpose," "moral qualities," "interest in work," "accomplishment," "accuracy, neatness, and promptness," "acquisition of knowledge." Again, what is the 100 per cent ideal which the teacher has in thought? What would the zero point represent on a percentile scale? "Does 50 per cent," to quote a writer on school problems, "mean half knowing a

<sup>1</sup> Kelly, F. J. Teachers' Marks. Teachers' College Contributions to Education, No. 66, p. 7.

<sup>2</sup> Starch and Elliott. Reliability of Grading High-School Work. Sch. Rev., vols. 20, 21.

<sup>3</sup> Camp, Frederick S. Marks: An administrative Problem. School Review, December, 1917.

lesson, knowing half a lesson, knowing half as much as the teacher knows, half as much as the text, half what the pupil ought to know, or half what he could know?" The problem is not simplified because letters, meaningless in themselves, are adopted to register a pupil's rank, for usually these are merely symbols into which the percentile scale is translated.

The difficulty is at once apparent. The teacher has but a hazy and ill-defined theoretical standard of excellence in mind by which she judges as best she may the standing of her pupils. It is not an accurate basis of measurement, for the reason that it is shifting and variable in her own mind and, furthermore, because she is trying to use one standard by which to express a judgment on a number of qualities which she wishes to take into account. As the standard of one teacher will be different, naturally, from that held by another, as long as the marking system is as it is, no other result can be expected than one in which there is a wide variation in expressed judgment. When, furthermore, there is a lack of coordination of work and of standards of judging the results, which invariably ensues if there be inadequate supervision, this variation in the percentage of pupils promoted in different classes will be greatly accentuated. The situation, then, in Columbia, bad as it is, in respect to lack of uniformity of standard, is not unusual. It will always obtain so long as the present marking system is retained and so long as teachers are not more closely supervised.

#### A PLAN BASED ON THE NORMAL DISTRIBUTION OF ABILITY.

The whole problem, however, would be greatly simplified were the teachers to discard the theoretical standard of excellence which they severally hold and frankly recognize that in relation to ability or effort or accomplishment, or, for that matter, any other quality they care to consider, their school class is a normal group of pupils, comprising a few individuals of marked proficiency, many of average attainments, and a few who are mediocre. Or, putting the fact another way: In every group not artificially selected there is a normal distribution with respect to any trait or qualification. The majority of the class will be found clustering pretty closely about the average or mean position, while the further above or below this mean one goes, the fewer will be the individuals found.

For example, many careful studies have shown that in any class there are a few who are excellent as compared with the remainder of the class; about twice as many are very good; 40 to 50 per cent are somewhere around the average; about as many are poor as are good; and about as many are very poor as are excellent. It is very difficult to measure the precise ability of a pupil; there is no known precise standard to use in measuring it, but it is not difficult for a teacher to

pick out from 3 to 10 per cent of her class who are excellent and to place the others in four or five groups with respect to these. Furthermore, she does not need a week of formal examinations at the end of the term, coupled with mid-term examinations, to make such a distribution. In short, as Bennett<sup>1</sup> says, "We can not presume to state how much ability a pupil has nor how valuable his work has been, but we can state his relative standing in the class with reasonable accuracy."

Finkelstein,<sup>2</sup> in his study of marks given at Cornell University, recommends a five-division marking system based on the following distribution of the individuals of a given class: Three per cent, excellent; 21 per cent, superior; 45 per cent, medium; 19 per cent, inferior; 12 per cent, very poor. Of this last group approximately 11 per cent should be conditioned and 1 per cent failed, he asserts. He holds that this distribution conforms to theoretical requirements and that it expresses fairly well the practice of Cornell University as shown by the tabulation of more than 20,000 marks extending over a period of three years and taken from 163 courses. His recommendations are made primarily for the high school and the university.

Other investigators have reached somewhat different conclusions regarding the distribution. Some of these are:

	A.	B.	C.	D.	E.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Cattell.....	10	20	40	20	10
Smith.....	10	15	50	15	10
Ruediger.....	4	24	44	24	4
Meyer.....	4	21	50	18	7
Foster.....	3	22	50	22	3
Dearborn.....	2	23	50	23	2
Gray.....	7	20	42	21	7
Cajori.....	7	24	38	24	7
Starch:					
Elementary.....	10	39	39	8	4
Advanced.....	14	44	33	6.5	2.5

These differences of opinion easily fall within the range of variation which a system to be flexible should permit. Such a scale could be stated as follows: Of the total number of marks given, let the "A's" comprise from 3 to 10 per cent; the "B's" from 15 to 22 per cent; the "C's" from 40 to 50 per cent; the "D's" from 15 to 22 per cent; and the "E's," or failures, from 2 to 10 per cent. A simple plan discussed by Bennett<sup>1</sup> which has worked satisfactorily is essentially of the same type as these, but with the proportions modified somewhat. It operates in this way: As early in the term as pos-

<sup>1</sup> Bennett, Henry E. *School Efficiency*. Ginn & Co., 1917.

<sup>2</sup> Finkelstein, I. E. *The Marking System in Theory and Practice*. Warwick & York, Baltimore, 1913.

sible the teacher divides her pupils, not physically but for purposes of instruction, into four tentative groups; the first being the "best quarter" of the class; the second consisting of the "second best quarter"; the third comprising all the others who have done work which will entitle them to be passed; and the fourth being those whose work is considered of a doubtful quality. These groups can be lettered, for convenience of reference, "A," "B," "C," "D," or, for that matter, any other letters or symbols would do just as well. The special attention and effort of the teacher throughout the term should of course be devoted to those in group "D," in order that the number therein who are finally required to repeat the term's work, designated as "E," shall be as few as possible. And none should be failed, finally, without the sanction of principal and supervisor after careful review and consideration and with the question consciously in mind: Where will the pupil profit most, in the old grade or in the new?

In practice, it should be observed, the teacher will occasionally find it necessary to deviate from the adopted norm of distribution. She should not hesitate to make such deviation if it seems to her to be necessary, but in every instance of failure to adhere she should be expected to make a full and satisfactory explanation to supervisor or superintendent.

Such plans as the foregoing are based upon two assumptions: That the work of a given grade and the standards demanded therein shall be so shaped that the large majority of the class shall at all times be doing successful work; also, that in every class the normal distribution of ability is approximately the same. Neither of these assumptions can be seriously questioned, we feel. Furthermore, the adoption of some such plan as this would make impossible such wide variations in standards of promotions as are to be found among the teachers of the schools of Columbia, for in each instance, under its operation, it is clear the class itself would virtually determine its own standard by which the individual members shall be judged in respect to promotion. Such a promotion basis as this would do away, too, with the necessity of spending so much of the all-too-limited time of the school on formal examinations and in grading the papers and recording and averaging the results.

#### THE PLACE OF FORMAL EXAMINATIONS.

Written examinations given in the form of tests at intervals during the term have a place in school procedure for which it is impossible to find a complete substitute, but as a basis for determining a pupil's fitness for promotion the formal examination held at stated times has fallen into disrepute. It is a useful means, for example, of showing the teacher where the preparation has been weak and



where it has been strong; it trains the pupil to use language concisely and with precision, under sharply drawn limits of time; it requires the quick exercise of judgment in respect to what is essential and what is relatively less essential; and it tests the ability quickly to organize knowledge and information in a new setting. But, in general, when promotion is made to turn upon it, in whole or in any considerable degree, the examination inevitably leads to "cramming," to undue worry and nervousness, and to working with the sole end in view of passing, causing the entire work of the school to center about the one idea. It puts a premium upon wrong methods, and stresses what should be but a mere incident in the plan of education; it provokes bitterness and unseemly strife between parents and teachers; and it occasions a vast amount of unnecessary and unprofitable labor for the teacher in reading an endless number of papers, in keeping records, and in making out reports.

That the formal examination is no criterion for determining ability is a conclusion abundantly supported by an examination of the school careers of men who have become famous. For example, Thomas A. Edison never could pass his school examinations, and when his teacher reported that it was a waste of time for him to attend school he was taken out and never returned. Charles W. Eliot, while president of Harvard University, once remarked that he would not have been able to pass the entrance examinations of his own university. Henry Ward Beecher stood sixty-fourth in an examination in grammar, while the boy who ranked first became a barber in a southern city. It is related that a Japanese university once appointed a faculty committee to investigate and report upon the question as to what examination could be given the youth of that land in order that young men of the greatest promise for the future might be selected. After an exhaustive study of the biographies of eminent men the report submitted was: "The one most prevalent characteristic of men of mark in their school days is that they could not pass their examinations." McAndrews,<sup>1</sup> who mentions these instances, among other illustrations, reports that he once took the examination records of 90 pupils entering a private high school, and divided them into 10 groups according to rank. At the end of each year for a period of years he reclassified them into the same groups and expressed the progressive standing of each pupil by a diagram consisting of lines which theoretically should have run in nearly a straight line across the page. Actually, however, the lines crossed and recrossed as lowest-group pupils rose to the highest group and the highest fell into medium or low places.

The school administrators and teachers of Columbia will do well to investigate thoroughly the basis of pupil promotion; to read the

<sup>1</sup> McAndrews. *Our Old Friend, The Examination*. Nat. Educ. Assoc., 1916, p. 527.

extensive literature of the discussion which has now been on for several years; and to examine the plans which are being adopted in other cities. Out of such critical examination will come a revision of their own plan which will eliminate the objectionable features now much in evidence and which unwittingly work injustice to many children.

## 2. THE TEACHING ACTIVITIES OF THE CLASSROOM.

### THE NEED FOR COORDINATED EFFORT.

Coordinated effort by the teachers of a system, which is one of the tangible results of constructive and helpful supervision of adequate extent, is by no means to be confused with uniformity in detailed practice. Within the field of education uniformity of special method, uniformity of schedule, uniformity of procedure, beyond that which has to do with making certain responses automatic, is to be condemned. Efficiency in a corps of teachers and efficiency in a corps of bricklayers are to be obtained in ways and by methods which are fundamentally different. The latter demands uniformity of aim and uniformity of method, reaching even to machine-like uniformity of movement, if the highest efficiency is to be attained; the former demands unity of purpose and of defined aim, but diversity and variety of method. While supervision in education then should seek to establish a clear-cut program of work in general, there should be the utmost freedom given the individual in the devices which he employs in accomplishing his part of the assigned task. Without such clearly defined purpose set up for the corps as a whole, practice will be haphazard, chaotic, decentralized, and hence ineffective, however excellent may be the work of individual teachers.

On the other hand, effort arbitrarily and artificially exercised to make uniform the practice of the members in dealing with the minutiae of schoolroom procedure will inevitably place upon a system a weight so deadening as to inhibit the exercise of that spontaneity and personal initiative so vital to teaching work of the first order. There are two dangers then which supervisors must avoid: Insisting upon uniformity of special method and not insisting upon unity of aim and of general method. The first of these, which results from a too mechanical system of supervision or because of a lack of interest and of initiative in the teaching corps, tends to produce a rigid, dry-as-dust, devitalized system. The latter danger arising either from a lack of vision and of discernment on the part of supervisors, or more frequently perhaps from a lack of sufficient supervision, if fallen into, brings about a condition similar to that wherein a team of horses are straining in opposing directions—effort is neutralized and rendered ineffective.

In respect to these two instructional and administrative dangers the system of Columbia has more fear from the latter, though it should be pointed out the first horn of the dilemma has not been altogether avoided.

Requiring that all classroom schedules within a given grade shall be uniform throughout the system; that pupils of high-school age shall march in and out of the building and from room to room, as do children of the primary grades; that high-school teachers shall employ the demerit system of marking deportment, one credit off for talking, one for minor misdemeanors, three for insolent rejoinders to teachers, and so on; promotion determined throughout by examination; and the putting of certain classes in a school on half time because the corresponding grades of another school are crowded and are obliged to go on half time, to the end that all may advance at the same rate, are some of the ways by which a system is formalized and made rigid and mechanical. Operating too, in the same direction and in a powerful way are the factors of an academic course of study and a great deficiency in school equipment needed to supplement the course and to enrich and vitalize the work. With a narrowly academic course of study and without supplementary aids teachers are unavoidably thrown back upon a complete dependence upon the prescribed textbooks, which in time tends to make teaching dry and formal and mechanical.

That the fear that such influences are at work in the Columbia schools tending toward a static condition is not groundless is shown by the fact that the survey committee was unable to find evidence that individual teachers, with too few exceptions, were trying out any new departures in their work; neither could the committee find that schools as wholes were striking out on distinctive lines of interest, although the question was put to many teachers and principals. A system that is growing will be changing; will be on the qui vive for suggestions; will be trying new things both individually and collectively; will be discarding outworn practices and substituting new ones; in short, will be showing the external manifestations of internal life. The committee was not able to escape the conclusion that the Columbia system, due in considerable part surely to lack of adequate maintenance and the benumbing effect which poverty produces, is now resting to a disquieting degree under an incubus which begets inertia.

Examples of the second danger, the danger of disintegrated and disunited effort in carrying into schoolroom effect defined pedagogical purpose, are likewise in evidence. Perhaps the first illustration to be cited is that not all of the teachers recognize the truth of what a few individuals are practicing, that a vital distinction exists between teaching to establish habits and teaching which is

intended to arouse emotions, to appeal to the feelings, to meet standards of conduct.

#### THE TWOFOLD TASK OF THE SCHOOL.

Upon the school society has placed a twofold task—that of establishing certain necessary habits and that of transmitting a body of useful relations. That is to say, in every subject studied in the schoolroom there are some things which, because of their intrinsic value, need to be known so well that correct responses become automatic. The multiplication table in arithmetic, some locative facts in geography, a few dates and names in history, certain correct usages of language, legibility and rapidity in the use of the pen, the correct spelling of certain words are illustrations of facts and habits which need to be so well established that they become automatic, making certain that correct responses come instantly without the necessity of the exercise of thought. It is a legitimate and necessary task of the school to see to it that this formal side of the education of the youth be secured. On the other hand, the larger task, though no more important one, is to transmit that body of relations among facts which the social group has found to be essential. This fundamental distinction between the formal content of education and that which has to do with relations, with generalizations, with principles, suggests at once a fundamental distinction in the methodology of the schoolroom. That is to say, experience and reflection have shown that certain types of teaching methods are effective in the field of the formal, whereas certain other methods of procedure are best in the field of the “cultural,” as the second is frequently called. In the one case the object is to establish habits, to make the use of facts automatic; in the other case the purpose is to arouse thought processes, to direct them along recognized lines, to discover thereby certain valuable relationships. The method best adapted to accomplish the first task is drill; that which has been found most effective in the second is the method of organized oral discussion. In the field of the automatic “thinking” is a mistake; in the field of the cultural to get relations by process of memory and drill and to avoid the full processes of thinking are likewise mistaken pedagogy.

Older education emphasized the former field, newer education the latter. Correct education will recognize the value of both, will carefully include in its course only the essentials of each, and will insist that each of these two tasks be done effectively by the general methods operative in the respective fields. The older schools carried drill to an absurd extreme; the newer schools, in the reaction away from excessive drill, went to the other extreme and declared that the necessary facts and habits could be gotten incidentally. We now know that the things which are left to incidental treatment are not gotten

at all and that the older schools were partly right and that the newer schools were only partly right. Best recent practice recognizes that the school has a twofold task and that the methodology of accomplishing the one is not applicable in getting results in the other.

#### CONFUSION IN METHODOLOGY.

Some teachers in Columbia, when a child can not tell promptly what the sum of 7 and 5 is, tell him to "think." So the child uses his fingers as an abacus and thus "thinks" out his answer. The fact, however, that the child can not recall instantly the sum of 7 and 5 and that he has to "think" about it is clear evidence that the teacher has not been successful in her work, in this particular at least, for her methods should have made it unnecessary for the child to do any "thinking" about it. Indeed, within the field of the formal, "thinking" is out of place for the very purpose of making things automatic and habitual is to get rid of the necessity for thinking. On the other hand, many teachers of Columbia are holding the children responsible for the list of relationships among facts which the several textbooks set forth without sufficient (in some instances without any) class discussion participated in by all to make the generalizations by the several authors mean anything beyond dogmatic statements. The failure of many of the teachers of Columbia to recognize that there is this fundamental distinction to be drawn in both the content and method of the several subjects of the curriculum accounts for much poor teaching. There are teachers in the department, however, who, it should be stated, do differentiate between the formal and cultural subjects in this matter. The work of these stand out in the corps, but until the corps as a whole recognizes this distinction and seeks to employ it in practice there will not be that good team work which ought to be the desideratum of all supervision and which is based in considerable measure upon unity in aim and in general method.

#### THE NEED OF ENRICHING MATERIAL.

Doubtless one reason why not more oral class discussion of lively character was found either in the elementary schools or in the classes of high-school rank, though there were notable exceptions in both, is due to the pitiable lack of supplemental help, such as books, charts, maps, and illustrative material of various kinds which the modern school finds indispensable.

Without such enriching material, the teacher is forced to depend entirely upon the textbooks which the pupils purchase. Now, a textbook because of its space limitations can be little more than an outline or a compendium of generalizations which its author has

compiled. The mere memorization of these generalizations is of no educational value. The value comes in wisely guiding the child along the path the author took in reaching his generalizations and in showing the child some of the rich and interesting detail which the author had before him when he was occupied in writing his text. By having such concrete detail at hand and through the rough-and-tumble of an interested group discussion wherein the children themselves constantly raise the questions which their interest prompts, the wise teacher can make the abstract principles and formal statements of the text mean something. Such work is genuine teaching, and its value is high, for thereby the child can be taught to attack a problem; how and where to secure data necessary to the forming of valid conclusions; how to compare and contrast statements; how to distinguish between the author's major point, his minor points, and the material which he employs to illustrate each; in short, thereby he can be taught how to study and not only how to study while he is yet in school but how to study for himself after he leaves school and begins his life work.

A library of books, then, which correlate with the subjects studied in the schoolroom should be accessible to every child in Columbia. Much of the work of each child should be that of delving into the rich material which can be assembled to seek out facts pertaining to the subject in hand, bringing these into the classroom and pooling them with similar contributions by the other members. In the doing of this the pupil will become familiar with library methods, with card catalogues, with ways of finding material in the magazine files, with various encyclopaedias and dictionaries, and how to make use of tables of contents and indexes. By so doing not only is the child himself to a degree drawing his own generalizations from out the body of concrete detail which lies at hand (infinitely more valuable than memorizing an author's conclusions), but he is learning how, while he is yet in school, to employ the methods he must use when he gets out of school if he is ever to accomplish anything as a student.

In respect to such fund of accessible material, the pupils in the schools of Columbia are woefully handicapped; far more so, in fact, than are children who attend country schools in many of the isolated places of this country. The public library is not of much help, for except for the rent and the small amount received by the librarian as salary, all support is by voluntary contribution, which is always intermittent and inadequate. The few books which are in the high-school library are kept locked up, because no way has yet been worked out for preventing loss when the children are given access to them; only beginnings of libraries have been started in the elementary schools by parent-teachers' associations, while the board of education is too hard pressed for funds in other directions to do much in the

building up of such vital equipment. In instances in the high school and in certain classrooms in the grades individual teachers, out of their own salaries, have purchased material of this character. A difference in the effectiveness of the work of such, as compared with those lacking such vitalizing and enriching material, is easily discernible.

#### HIGH SCHOOLS NEED WELL-EQUIPPED LIBRARY ROOMS.

The teaching activities of a high school, in particular, should be made to center about the library, for in no other way can the pedagogical error be avoided of attempting to teach subjects instead of teaching how to study subjects. It is clear that in the limited time of a high-school course, and with immature pupils who comprise the student personnel, no relatively complete mastery of any subject can be obtained. But a trail through the woods of each subject in the courses offered can be blazed, and the pupils can be taught how to use the tools which are indispensable to such work. Owing to the complete lack of books and of library facilities, the high-school teachers of Columbia are attempting only to teach the subjects assigned; in consequence, the pupils are not learning anything at all about how to go about independent study. Learning how to use a library—that is, learning how to use the tools of study—should be begun well down in the grades and continued throughout the entire school course. At present Columbia is financially interested in providing library facilities for her citizens only to the extent of \$65 per month—\$30 for rent of the library rooms, \$35 for the librarian's salary, and nothing for books. A project for a Carnegie library was turned down, because it was thought Columbia could not afford to keep up the running expenses required. If pupils go through the elementary and high schools as they are now doing, without gaining any first-hand acquaintanceship with library methods, nor any appreciation of the need or value of books in pursuing their studies, it is difficult to see how, when they graduate and settle down in the community as citizens, they will be any more interested in securing better library facilities provided for at public expense than is the present citizenship of Columbia. The schools will not have done their rightful duty in the matter unless through the practical work of the classroom a demand for books is created so insistent as to lead to action.

A room convenient to the study hall of the high school should be set apart as a library room; the manual training department could equip it with tables, book racks, and filing cases for pictures and clippings; a teacher trained in library methods should be placed in charge; and a sufficient amount should be provided in the yearly budget to enable a good working aggregation of books adapted to the

work of the classes to be quickly assembled. The invigorating influence of such an arrangement would be felt at once.

A working basis for such an allowance is suggested by Chancellor,<sup>1</sup> who has made a special study of the problems of school administration. His estimate of what a school department should do in this connection, together with his comment thereon, follows:

ESTIMATE OF A YEARLY ALLOWANCE FOR BOOKS AND SUPPLIES.

As with a household of highly educated people, so with a school, the tendency is steadily to increase the demand for funds to meet increasing needs. To desire things and services is to live in civilization. The following standard of allowances for books, general supplies, manual training, etc., is a reasonable minimum where a community means to have good schools. With experience, much larger sums can be well spent, and education will be correspondingly improved.

*High school.*

Books (per pupil)-----	\$4.00
Manual training-----	10.00
For science apparatus annually per class of 24 pupils-----	250.00
For reference books per class of 24 pupils-----	50.00
Stationery-----	1.00
Incidentals-----	1.00

*Elementary schools.*

Grammar grades:

Books (per pupil)-----	\$2.00
Manual training-----	4.00
Stationery-----	.75
Incidentals-----	.50

Primary grades:

Books (per pupil)-----	\$1.00
Manual training-----	2.00
Stationery-----	.50
Incidentals-----	.25

Kindergarten:

All supplies (per pupil)-----	1.00
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*General.*

For reference books per class of 42 pupils-----	20.00
For library (class) per class-----	25.00

*Evening school.*

All books and supplies per class of 24 pupils, excepting science and manual training----- 50.00

For evening lectures, \$10 to \$25 may be allowed for the lecturer, \$5 to \$10 for his expenses (average), and \$5 for lantern operator. In a public lecture course, most of the lectures should be illustrated.

<sup>1</sup> Chancellor, W. E. Our Schools, Their Administration and Supervision. (1909), p. 383.



The foregoing allowances do not include the stereopticon lantern and slides for every school, and at least two pianos in every elementary school, one for the assembly room and one for the kindergarten.

#### THE METHOD OF ORGANIZED ORAL DISCUSSION.

The general method of organized oral discussion based upon the pupils' access to interesting and pertinent material is a procedure, however, that can not be employed without some care, for, unless carefully guarded against, discursiveness in discussions will ensue and no tangible precipitate will result. To secure satisfactory results, the reading and discussion must proceed systematically and orderly. The teacher must make the material used subservient to her own plan and scheme of lessons and not be led by it; and in conducting the recitation she must guide the discussion, otherwise it will drift into aimless, desultory, fruitless conversations. This demands that the teacher devote considerable time to preparation, for if she herself has first worked over the material accessible to the children she can better determine what direction it will be best to give the discussion and what contribution she can properly expect from the pupils. In the presentation there are certain facts which are important apart from their bearing in the development of a given generalization. These intrinsically valuable facts should be gotten up at the close of the series of lessons, preserved in notebooks, and be made the subject of brief reviews and drills from time to time to insure permanency of retention. Unless this is done, it will be found that confusion of mind will ensue and that valuable results will have been lost.

Such work has for its purpose, primarily, the discovery of general knowledge, during the progress of which the teacher guides her pupils through their study of objects, examples, concrete details to certain generalizations which, taken together, constitute the principles of the given subject. In themselves and of themselves particular ideas or specific facts have little meaning or significance. The value lies in the meanings, explanations, relationships which can be detected, and which, in turn, can be employed to interpret other facts and determine other activities.

#### THE FIVE FORMAL STEPS OF THE HERBARTIANS.

Such work, if consistently carried out, is both inductive and deductive in nature, the essential stages of which comprehend the five formal steps of instruction formulated by the Herbartians: 1, Preparation; 2, presentation; 3, comparison; 4, generalization; 5, application; or, putting it another way, there should be, first of all, a clear statement of the problem in relation to essential details and significant facts; then, by comparison and contrast of individual

facts, a hypothesis or tentative generalization is reached, which, through application to a fresh set of facts, by way of interpretation and of reviewing the ground already gone over, is tested out. Huxley,<sup>1</sup> in discussing the steps through which the mind moves in the acquisition of general truths, is in essential agreement with the Herbartians, as McMurry<sup>2</sup> points out. Huxley's statement is:

The subject matter of biological science is different from that of other sciences, but the methods of all are identical.

And their methods are:

1. Observation of facts, including under this head that artificial observation which is called experiment.

2. That process of tying up similar facts into bundles, ticketed and ready for use, which is called comparison and classification, the results of the process, the ticketed bundles, being named general propositions.

3. Deduction, which takes us from the general proposition to facts gained—teaches us, if I may say so, to anticipate from the ticket what is inside the bundle. And, finally—

4. Verification, which is the process of ascertaining whether, in point of fact, our anticipation is a correct one.

Such are the methods of all science whatsoever.

While good teaching practice does not demand that these steps be formally segregated and rigidly followed, for such procedure tends to formalize instruction and make it mechanical, nevertheless good results require that this round of steps or stages in instruction be not seriously invaded, though, it should be added, such complete round should not necessarily be effected within the short space of a single recitation period, for a given lesson unit may properly require a number of recitation periods for its presentation.

#### THE FUNCTION OF THE TEXTBOOK.

It must not be overlooked, in work of this character, however, that the proper function of the textbook is to supply the pupils' need for a handy reference book, on the one hand, and, on the other, to meet the need of the teacher for a succinct statement or outline of the essential principles and general notions of the subject under consideration. The content of school subjects, it must not be forgotten, first of all exists outside the covers of the text; neither is it, in its original state, broken up into subjects and set forth in logical sequence and systematic arrangement. This is a device of pedagogues and bookmakers for convenience of instruction. The procedure has value, but when the subject matter of education is disassociated from the activities and processes of the world which created it; when it is divided up into compartments called "subjects"; and when each is hydraulically compressed between the covers of a two or three hundred page text and taken into the schoolroom, there

<sup>1</sup> Huxley. *Lay Sermons*, p. 83.

<sup>2</sup> McMurry. *The Method of the Recitation*, p. 290.

is a strong tendency for the teacher to go about her teaching as though the textbook comprised the whole of education; as though its contents were wholly dissociated from the life going on all about; as though she looked upon it merely as something to be memorized, recited, examined, and then cast aside and forgotten.

EDUCATION IS REMAKING AND EXTENDING EXPERIENCE.<sup>1</sup>

Education is coming now to be looked upon as that process by which we remake and extend our experience and in the process acquire that body of habits and of knowledge which freedom and effectiveness in the social group demand. The ideal way of securing such education is by actual personal contact with the essential realities of life, very much as the race has gotten its education. But this is found, in its extreme form, to be impracticable; it takes too much time for one thing; then, life as it runs deals with detail, and detail without order or arrangement. To short-cut the educational period through which the race has gone we must group and classify details and integrate them, pointing out their essential relationships and the rules and principles which govern them. But one's own experience can be remade and extended only as such activity deals with the realities in some individual, personal, and truly vital way. Hence, the teacher at every opportunity should break away from reliance upon the text and take advantage of every chance to bring her children into direct contact with the processes and activities themselves. An important step in this direction, where the experience with the thing itself is not possible, is to get a variety of books dealing with concrete detail in a vivid and interesting way; organize this material about essential, integrating, and unifying principles; meanwhile connecting the whole up with the child's old experience in an effective way. In this manner errors are corrected; limited and meager conceptions are enriched and made pregnant with meaning; and new associations among the various elements are established; thus experience is worked over and added to and readjusted, which is education. Limiting a pupil's time and thought to the summary or the contents of a subject which the author of a given text sets forth, however valuable the text may be as an outline, will never create experience, neither will it contribute, except slowly and in meager degree, to his education.

Obviously, then, in the teaching of any subject or of any topic a basis in experience is indispensable, for there can be no remaking of experience if experience be lacking. The teacher, therefore, who takes up ideas for which there is no foundation in the pupil's experience will cause a break in the educational process which will lead

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<sup>1</sup> Earhart, Lida B. *Types of Teaching.*

to confused attempts to understand, resulting finally in mere memorization, if the pupil be working under the spur of a prospective examination. So, also, will the educational process be broken if the teacher does the major part of the work herself, as many do, for thereby she and not the child will be gaining the experience and hence the education. Verbatim reproductions; rote recitations; unorganized and detached reading, observation, experiment, or investigation; the assignment of lessons by pages rather than by topics; the viewing of the textbook as the source rather than as an outline of subject matter; the failure to recognize that both particular facts and general truths have differing values; too much attention to the machinery of education and not enough to its spirit; the insistence on a standard of thoroughness so high as to become deadening in its effect; the lack on the part of the teacher of a mastery of the subject matter under discussion and of a clear organization of its content in her own mind; and the failure to follow up her work with cumulative reviews of a few important matters to be kept clearly in mind are among the chief pedagogical sins which interfere with the process by which the child remakes and extends his own experience.

#### WHAT SUPERVISION SHOULD ACCOMPLISH.

Good supervision, by setting forth in clear light the basic principles underlying teaching practice, by defining the criteria by which both the method and the result are to be judged, will thereby take a long step forward in eliminating from the corps such mistaken practices as the foregoing; for by so doing, the teachers will be given definite standards by which to square their own efforts. Good supervision, in addition, will, in kindly fashion, point out to the individuals wherein their special methods and particular practices fall short of the ideal which has been defined for the corps. Good supervision, too, will not fail in commending those instances wherein the procedure is of the character required; for it must not be forgotten that it is good work which should be sought, rather than bad work, and that with most people a single word of commendation, where commendation can honestly be made, far outweighs 50 spoken in a fault-finding spirit. The words of Roger Ascham, the famous English schoolmaster of the sixteenth century, are quite as true of teachers and of teaching as they are of children, of whom he wrote, apropos of the study of Latin:

Where the childe doth well, either in chosing, or true placing of wordes; let the master praise him, and saie, "here do ye well!" For I assure you, there is no such whetstone, to sharpen a good witte and encourage a will to learninge, as is praise. But if the childe misse, either in forgetting a worde, or in changing a good with a worse, or misordering the sentence, I would not have the master either frowne or chide with him, if the childe have done his diligence,

and used no trewanship (truantship) therein. For I know by good experience that a childe shall take more profit of two fautes (faults) kentlie (gently) warned of, than of foure things, rightly hitt."<sup>1</sup>

#### THE WASTAGE OF TIME.

Inadequate coordination of the efforts of the Columbia corps again expresses itself in the frittering away of a tremendous amount of time, in the aggregate, by the children in the schools. Many of the teachers have their work so well planned that at every minute of the day they know exactly what they are going to do next. In consequence, they never lose any time in turning from one thing to another; there are no ragged or frayed edges to their work; everything is crisp and clear cut; and both the teacher's and the pupils' time is utilized to the utmost. Such a teacher appreciates the fact that there are just so many minutes in the day and that there are none to be lost through unnecessary interruptions nor through lack of a definite plan of procedure. Such teachers during the first few days of a school term establish in their classes certain methods of procedure which are held to throughout the term. These have to do with such matters as how the class shall enter and leave the room; how it shall pass to the blackboards; how papers shall be distributed and collected; how the children shall stand when reciting; how the teacher's attention is to be secured with the least disturbance to others; what shall be done with hats and wraps and how they shall be distributed; what is to be understood about whispering and about helping one another; what is to be done in a fire drill—in short, all those matters which affect the handling of the class as a whole and which can be rendered automatic and habitual are taken up, the method of procedure set forth and then held to, to the end that these matters may not be constantly intruding themselves, diverting the attention of teachers and children, disrupting and disorganizing the work, and wasting the precious time of all.

Aside from the failure to plan work carefully and to organize and make habitual the general schoolroom activities of the class, there is a third danger point from the standpoint of wastage of time, especially in the primary grades, namely, in the so-called "busy work" devices. In classes of normal size it is impossible for the teacher of the primary grades to hold the attention of all of the pupils when taken en masse. It is customary, therefore, to break the class up into two or more groups and to give those at the seats "busy work" to occupy their attention while the remainder of the class are reciting under the immediate direction of the teacher. Such "busy work" consists of number, word, or phonogram cards, blocks, pictures, colored crayon, dominoes, scissors and paper, raffia weaving,

<sup>1</sup> Ascham, Roger. *The Scholemaster*. Arber Edition, p. 62.

and what not, all ostensibly engaging the child in activities which are profitable educationally. This matter of "busy work" is a difficult problem for primary grade teachers at best; but in Columbia, except in a few instances, it is not being well handled, for it is all too evident that but poor success attends the efforts. This, however, it should be pointed out, is in part due to a pitiable meagerness of equipment at the command of the teachers, with the result that in an unduly high percentage of cases the devices merely keep the children quiet while the teacher is occupied with others. In such instances it would be more profitable were the children to be sent out of doors and permitted to play their games. Smaller classes, better equipment, a clearer view of the pedagogy involved, more definite planning of the teachers' work, more adequate supervision, and beginning children trained in good kindergartens are ways whereby this difficulty of profitably occupying the time of primary grade children can be met.

Observation will convince one that the aggregate wastage of children's time in many schoolrooms in every system is enormous. It is a matter deserving the most thoughtful attention of every supervisor and teacher. Lack of careful planning of the day's work accounts for much of it; permitting interruptions of all kinds (entertainments, reports, parades, preparation for holidays and vacations) to the orderly procedure of school work accounts for much also; but the fundamental difficulty is the fact that too few teachers place a high value on the work they are doing, consequently they feel that the loss of a little time here and there, the aggregate amount of which during a term or year they utterly underestimate, does not much matter. The teacher who holds her own work in high esteem, and who has the interest of her pupils truly at heart, will be very jealous of encroachments by anybody upon her time. Superintendents, supervisors, and principals should stoutly support her in such an attitude, and avoid, except in emergencies, the practice of sending around notices or calling for reports on special matters, or in any other way diverting her attention from the work she is in her classroom expressly to do. With the multitude of demands pressing in on the school—ethical, moral, patriotic, esthetic—it must not be forgotten that the peculiar function of the school is still that of providing a place where children are to be taught by teachers. Efficiency in this work demands primarily that the teaching process be not interrupted.

#### TIME WASTAGE IN THE HIGH SCHOOL.

That the wastage of time is not limited to the primary grades of our school systems is obvious to anyone who has had experience in school visitation, but the extent is a surprise, doubtless, to all who

have not made the matter a subject of investigation. Another study of the same character, this time of high-school classes, was made by Stephen S. Colvin, the State inspector of the high schools of Rhode Island. He reports, after an observation of 200 high school recitation periods, the following distribution:

During 1 period of the 200 which he witnessed the pupils of the class were mentally active but 2 minutes of the total 45 minutes; during 5 periods the class was active for approximately 5 minutes; during 9 periods for 10 minutes; during 21 periods for 15 minutes; during 37 periods for 20 minutes; during 55 periods for 25 minutes; during 38 periods for 30 minutes; during 22 periods for 35 minutes; during 9 periods for 40 minutes; and during 3 periods only did the classes observed profitably employ as much as 42 of the 45 minutes. That is, out of a possible teaching time of 9,000 minutes, 4,943 minutes were employed, and 4,057 minutes were wasted. Commenting on these results he says:

These observations seem to indicate that under ordinary classroom conditions in a large-sized high school, half of the day is wasted. While conditions vary greatly with various teachers, subjects, schools, and classes, it is probable that on the average the waste is no less than that found in the classes observed.<sup>1</sup>

In his analysis of the causes of this wastage in the classroom, Colvin, among other reasons, enumerates the following: The materials used in laboratory and classroom are not placed where they are readily accessible, nor is the routing of the material planned out in systematic detail. Time is wasted in such mechanical operations as the distribution of themes and paper and in passing to and from the blackboard. Much of the material which the pupil gets through dictation by the teacher could be gotten more economically in other ways. Requiring pupils to write out each question, as well as its answer, as in an examination, is often a waste of time. Employing many profitless forms of written work, the careless assignment of lessons and the failure of the teacher to impress the pupil with the value of the task assigned account also for much wastage. And, finally, using uneconomical methods of testing the knowledge of pupils, roundabout and unpsychological methods of drill, wasteful and unskillful methods of questioning, vague statements by both teacher and pupils, and the lack of an adequate lesson plan are other causes entering into this matter of the wastage of time, he holds.

#### THE NEGLECT OF PUPILS IN THE RECITATION.

Along another line, too, teachers, not only of the high school but of the grades as well, should be on their guard to prevent wastage, that is, through failing to grant to every pupil equal opportunity for par-

<sup>1</sup> Colvin. *An Introduction to High School Teaching*. Macmillan, 1917, p. 128.

ticipation in the activities of the classroom. Unless teachers are very careful, certain pupils in every class are sure to be neglected. Owing to the difference among pupils in ability, initiative, aggressiveness, talkativeness, and general attractiveness of personality, it is found that opportunity for participation is unequally distributed. A study of this matter by Dr. Ernest Horn,<sup>1</sup> in 1913 and 1914, sought answers to the following questions:

1. How equally is opportunity for classroom participation distributed?
2. What is the relation between the amount of reciting done and the general all-round ability of the pupil?
3. What is the relation between the amount of reciting done in each subject and the special ability in this subject?
4. How many opportunities for participation in class work does the pupil have per hour?
5. What proportion of the pupils' recitations are utter failures?
6. What is the relative amount of time given to talking as a form of participation as compared with other activities?
7. How many of the pupils' recitations consist of consecutive participations without the recitations of any other pupils intervening?
8. What is the length of pupils' recitations?

Records were made in the classes of 229 teachers in 22 different schools of 19 different systems in 11 different States and embraced data taken from the kindergarten, from each of the elementary grades, from the high school, and from the college. Conclusions were not reached on all these points, but several general tendencies stood out clearly, chief of which are the following:

The best fourth of a class in general ability does about one and three-fifths times its equal share of reciting; the second fourth, about one and one-ninth times an equal share; the third fourth, about four-fifths of its share; and the last fourth, approximately less than one-half of its share. That is, in general, the lowest quarter in ability does about a fourth as much reciting as does the highest quarter. There is also in evidence a tendency for the percentage of reciting done by the best quarter to increase with an advancing grade, so that the best pupils in the upper grammar grades do more reciting proportionally than the best pupils in primary grades. This inequality in recitation, too, is higher in the content subjects than in those subjects where the formal element predominates. That is, in phonics, spelling, and mathematics the distribution is tolerably even; in geography, science, and literature the first quarter does about one and one-half times as much reciting as does the fourth quarter; whereas in English composition, history, social, and industrial life, and in music the distribution is much more uneven, the first quarter doing from one and four-fifths to two and three-fourths as much reciting as does the fourth quarter.

That the formal subjects of school curricula should be those in which is found the greatest equality of opportunity is to be expected,

<sup>1</sup> Horn, Ernest. *Distribution of Opportunity for Participation Among the Various Pupils in Classroom Recitations*. Teachers College, Columbia University; Contributions to Education, No. 67.



for the methods which are particularly adapted to the teaching of formal subjects are those in which it is relatively easy for teachers to secure an equable distribution of opportunity. On the other hand, in dealing with a content which depends largely upon the method of organized oral discussions, the subject matter is more difficult and likewise more interesting to the teacher, so that her attention is likely to be occupied more with the subject than with questions of classroom procedure. This also explains, in part, doubtless, the tendency for inequality of opportunity to become accentuated as one advances on up the grade-line; the greater age of the pupil, too, makes him better able to make his personality felt in gaining the recognition and attention of the teacher in contrast with those whose exercise of personal initiative is less marked.

In summary, then, of this discussion of the instructional activities of the classroom, a pedagogical rosary might be suggested, the beads of which should be religiously "said over," morning, noon, and night by every supervisor and teacher:

Am I distinguishing between formal and cultural content and do I use methods adapted to each? Am I guarding against discursiveness in classroom discussion? Do I make effective use of every minute in the teaching day? Have I systematized my schoolroom procedure so that no time is lost? Is my teaching so shaped that the experience of every child is being remade and extended? Do I give the timid unprepossessing pupil in my class as much attention and opportunity as I do the brilliant and attractive pupil? Is my teaching serious and thoughtful or does it consist chiefly of memoriter work? Do I conduct my classes in a clear-cut well-defined way, as though I knew what I wanted and how to get it? Do I make my lesson assignments in a way such that the pupils can work intelligently and economically? Is new matter carefully based on that which the pupil knows? Am I requiring my pupils to draw their own conclusions and generalizations as a result of their own efforts and am I giving them the concrete material essential to work of this character? Do I see to it that when generalizations are made they are applied to new sets of concrete details? Am I skillfully using the pupil's out-of-school experience to illustrate the points I want to make? Am I developing each subject clearly and logically according to its own nature and correlating the school subjects properly? Am I sufficiently familiar with the work of the system as a whole to know what pupils have studied when they come to me and to know what work they are expected to do when they leave me? Am I getting acquainted with my pupils as individuals, with their home life, with their school life, and am I making full use of this knowledge?

#### UNIVERSITY STANDING OF COLUMBIA HIGH-SCHOOL GRADUATES.

In connection with this discussion of the teaching activities of the classroom the committee considered it of value, as well as of interest, to secure a statement from the dean of the University of South Carolina regarding the scholarship record in the university made by the graduates of the local high school in comparison with the average record made by all of the students of the university and in compari-

son also with various school groups. As it turns out, however, the only comparison of any especial significance is the one between the Columbia group and the total student body of the university, for there are too few students in other high-school groups to warrant the drawing of comparisons with them.

The records show that during the first semester of 1917-18, Columbia graduates, of all classes, were graded on an aggregate of 139 units of work. Of this number 48 units were graded "A," the highest mark given; 83 were graded "B"; 5 units were conditioned; and 3 classified as failures. That is to say, 34.5 per cent of the work fell into the first scholarship rank, against an average for the university of 32.5 per cent; 59.7 per cent of the work was given a second grade as compared with an average for the university of 54 per cent; while but three-tenths of 1 per cent was conditioned and two-tenths of 1 per cent failed, in comparison with an average for the university of 9.8 per cent and 4.1 per cent, respectively. In other words, Columbia graduates maintained a rank well above the average scholarship ranking for the university. The table which follows bears out the statement made by the dean: "I can say that our records for the past five or six years show that the Columbia students generally maintain a high average of scholarship."

*Relative achievements of university students, first semester, 1917-18.*

Students.	Total number of students receiving a mark.	Grand total of units of work taken by all students.	Scholarship mark.							
			"A" 90-100.		"B" 75-89.		"C" 65-74 (condition).		"D" 0-64 (failure).	
			Total units.	Percentage of grand total.	Total units.	Percentage of grand total.	Total units.	Percentage of grand total.	Total units.	Percentage of grand total.
University undergraduates.....	254	1,445	467	32.5	778	54.0	140	9.8	60	4.1
Students from Columbia High School.....	24	139	48	34.5	83	59.7	5	.3	3	.2
Students from Charleston.....	4	20	11	55.0	7	35.0	2	10.0	.....	.....
Students from Mullins.....	5	31	13	41.9	18	58.0	.....	.....	.....	.....
Students from Lancaster.....	7	41	13	31.7	22	53.6	5	12.2	1	.2
Students from Florence.....	3	15	8	53.3	3	20.0	3	20.0	1	6.6
Students from Laurens.....	3	19	5	26.3	14	73.6	.....	.....	.....	.....

METHOD OF ENTERING THE UNIVERSITY FROM THE COLUMBIA HIGH SCHOOL.

Inasmuch as the statement has been made that the University of South Carolina admits students who have not completed a full four-year course at the high school, and that in consequence it is difficult

to hold together a fourth-year class in the local high school, the following compilation by the dean of the university is in point:

*Columbia high-school students entering the University of South Carolina.*

Sessions.	Total university enrollment from Columbia.	Number coming in by examination or with less than 4-year high-school course.	Number entering with full high-school course.
1914-15.....	7	.....	17
1915-16.....	16	.....	116
1916-17.....	5	2	3
1917-18.....	9	3	6

<sup>1</sup> Admitted by diploma; no fourth year in high school.

<sup>2</sup> Made full 14 units by examination.

<sup>3</sup> Graduated February, 1916; granted diploma for 3½-year course.

SUMMARY.

1. The teachers need more criticism of constructive and kindly character than they are now getting.

2. The superintendent has been too much occupied with the building program to give his attention to supervision; the principals have had to teach full time, and have therefore not supplied the needed supervision; a considerable part of the elementary school supervisor's time has been diverted to the distribution of supplies; in consequence, supervision of the teaching activities is inadequate and the work is lacking in coordination.

3. This lack of coordination expresses itself especially in the promotion of pupils, in the teaching activities of the classrooms, and in the achievement of the pupils as shown by the standard educational measurement tests.

4. The promotion plan based upon formal examination coupled with the term standing has resulted in a great variation among schools and among classes in standards of promotion.

5. This variation in promotion standards is even greater in the high school, where promotion is by subjects and not classes. This failure can not be accounted for wholly by irregularity in attendance.

6. The marks given by the teachers are inaccurate expressions of pupils' ability and work injustice on individuals.

7. The present system of promotion should be supplanted by the system which recognizes that there is a normal distribution of ability common to all groups of pupils.

8. In the instructional activities of Columbia there are evidences of two dangers—(1) toward inertia and (2) toward disintegrated and disunited effort.

9. The distinction between the methodology of the formal elements and the methodology of the cultural elements of a subject should be clearly drawn by the teachers.

10. There is much need of enriching courses of study through supplying adequate supplementary material and through building up school libraries.

11. The present close adherence to textbook teaching should be supplanted by the method of organized oral discussion.

12. Much attention needs to be directed to eliminating the wastage of pupils' time now taking place. This wastage is especially apparent in connection with the so-called "busy work" of the primary grades, in lack of a careful planning of the day's work, in frequent interruptions to the work of pupils and teachers, and in the failure of teachers to place a sufficiently high value on their own work.

13. Teachers need to be alert to see that the pupils who are timid, reticent, and retiring in disposition have just as much opportunity to participate in classroom work as those who are aggressive and talkative.

### 3. THE RESULTS OF THE STANDARD EDUCATIONAL MEASUREMENT TESTS.

Until within a decade the results of the teaching activities of the school, expressed in terms of the progress of children in the subjects which the schools offer, have been entirely a matter of personal opinion. No educational yardstick has been at hand by which efficiency could be judged and the relative standing of schools or of classes determined. Within a very few years, however, a system of tests has been devised and so standardized that it is now possible, in some lines of school work, to form a comparative estimate of the achievement of schools and of systems which is fairly accurate within the restricted fields wherein the tests operate.

So far as this movement has developed, it offers the greatest promise of success in providing a basis for judging of that part of school work which has to do with establishing automatic habits, as in spelling, penmanship, and the processes of arithmetic. There is much of the work of every good school, however, that is too intangible to admit of definite, precise measurement—the character-creating influence of the school, to mention but one illustration. On the other hand, there is much of the work of the school that is or should be definite, tangible, and hence measureable. It is in this field of the school's activity that educational measurement tests can render a district an important service.

Cubberley very well summarizes the larger possibilities of this development in educational practice when he says:<sup>1</sup>

The significance of these new standards of measurement for our educational service is indeed large. Their use means nothing less than the ultimate transformation of school work from guesswork to scientific accuracy; the elimination of favoritism and politics from the work; the ending forever of the day when a personal or a political enemy of a superintendent can secure his re-

<sup>1</sup> Cubberley, E. P. *Introduction to Educational Tests and Measurements*. By Monroe, DeVoss, and Kelly, 1917.

moval, without regard to the efficiency of the school system he has built up; the substitution of well-trained experts as superintendents of schools for the old successful practitioners; and the changing of school supervision from a temporary or a political job, for which little or no preparation need be made, to that of a highly skilled piece of social engineering.

#### THE TESTS EMPLOYED IN COLUMBIA.

In Columbia no attempt was made to measure the quality of the penmanship, for the schools were in process of changing their system of handwriting to that known as the Palmer system, a system which has met with favor in many places where it has been introduced. In changing from one system of penmanship to another, the transition period is always a chaotic one, for it means breaking up one set of muscular coordinations and substituting another. Columbia was just at this point; it was felt, therefore, that any comparison with cities wherein no such transition was under way would be unfair; consequently the standardized penmanship test was not employed.

Three tests, however, were used—the Ayres spelling test, the Stone reasoning test in arithmetic, and the Courtis arithmetic test—the latter testing the efficiency of the work of the schools in addition, subtraction, multiplication, and division of integers. These are described in order and the results obtained by each set forth.

#### ALLOWANCE TO BE MADE FOR UNUSUAL CONDITIONS.

These standardized tests were given at the close of the fall term of school. Unfortunately the term's work was interrupted on two occasions by a shut-down of the schools for a considerable period. In terms of school work the closing of the schools always means a greater interruption to the regular work than the length of the period signifies, for it always takes an appreciable time for classes to get back into their stride. On the other hand, however, the tests have to do chiefly with determining how nearly automatic certain reactions have become; so there ought to be a point somewhere in a child's progress where these reflexes are so well established that interruptions should not affect them too seriously. If interruptions do make a radical difference in measurable results, the fact would seem to argue that the work has not yet reached the requisite efficiency.

Again, it should be pointed out, in many of the cities which have contributed to the development of the standard, these tests, given in Columbia for the first time, have been repeatedly given. A familiarity with the technique and routine of procedure doubtless would have an appreciable effect upon the result and is a factor for which allowance should be made.

## A. THE SPELLING TEST.

Spelling as a differentiated subject in the Columbia schools is begun in the second grade and continued throughout the seventh. In the second and third grades 150 minutes per week are given to it, 100 minutes in each of the fourth and fifth grades, and 80 minutes in the sixth and seventh.

Class lists of words misspelled by the pupils are prepared by the teacher, and the pupil is encouraged to watch his own work and list the words which he commonly misspells. These are used to supplement the assignments of words taken from the regular spelling text. The instructions issued to the teachers by the elementary supervisor concerning the teaching of spelling are commendable.

## PERTINENT QUESTIONS TO THE TEACHER OF SPELLING.

Under this caption the supervisor has asked the teachers a series of searching questions which are well worth repeating and emphasizing. The list follows:

1. Are you in any persistent and systematic way following up the work taught by investigations of various kinds to test the ability of the pupils to spell these words? This question might be analyzed and stated more specifically, as: (a) How many different words have you taught this term? (b) Do you have the words already taught checked or listed, so that you can give the pupils a test, including all or a random selection of the words taught up to date? (c) How do you use the results of this test in order that the pupils may derive the most benefit? (d) Is the nature of the test such as to prove the pupils' knowledge of the meaning of the words as well as their ability to remember the order of the letters?

2. In dictating words, whether daily, weekly, or monthly, to what extent do you require their use in sentences?

3. Do you agree that the real and final test of ability to spell is found in spontaneous written composition? If so, to what extent do you use this test systematically? In other words, how many of the words taught are the pupils using intelligently in their original compositions, when the expression of thought is uppermost in their mind? Can you devise some means of applying such a test without consuming an undue amount of time and energy? Would it be practical for the teacher or pupils to keep an alphabetical list of all words taught, for the purpose of checking up all of the misspelled words in a set of compositions occasionally? If this idea, or some modification of it, could be employed to test the use of all words taught, would it not show (a) the words not used at all and (b) the words accurately and intelligently used?

4. Do you quite frequently inspect the personal list of the pupils to ascertain whether or not they are actually being used? Do you ever compare the personal lists of individual pupils with their compositions for the purpose of learning—(a) Has the pupil studied his list? (b) How many words are accurately used in the composition and included in the list? (c) How many are inaccurately used and in the list? (d) To what extent is the pupil recording misspelled words? Would not a custom of this kind be very helpful, especially with poor spellers?

5. Is most of the time spent on this subject used for teaching or testing? Do the pupils feel that it is a time for thought or for drill?

## THE TEST DESCRIBED.

The test which was given from the second grade to the eighth, inclusive, consisted of the words for each grade taken from Ayres List B, of "One Thousand Commonest Words."<sup>1</sup> The words in each list have been spelled correctly by 73 per cent of the children in the respective grades in tests which have been given in many cities. Therefore 73 per cent may be accepted as the standard for each grade in Columbia, if the teaching of spelling is to be adjudged equal to the average of many cities of the United States. The six tests which were used follow:

<i>Second grade.</i>	<i>Third grade.</i>	<i>Fourth grade.</i>	<i>Fifth grade.</i>
1. nine	1. catch	1. eight	1. sometimes
2. got	2. able	2. aboard	2. period
3. spring	3. fell	3. restrain	3. firm
4. stone	4. soap	4. population	4. crowd
5. fall	5. express	5. figure	5. relative
6. put	6. table	6. everything	6. serve
7. Monday	7. road	7. farther	7. due
8. take	8. power	8. knew	8. ledge
9. its	9. another	9. fact	9. information
10. sold	10. church	10. public	10. present

<i>Sixth grade.</i>	<i>Seventh grade.</i>	<i>Eighth grade.</i>
1. often	1. meant	1. organization
2. total	2. distinguish	2. emergency
3. examination	3. assure	3. appreciate
4. marriage	4. probably	4. sincerely
5. opinion	5. responsible	5. athletic
6. witness	6. difficulty	6. extreme
7. theater	7. develop	7. practical
8. supply	8. material	8. proceed
9. course	9. senate	9. cordially
10. doubt	10. agreement	10. character

*Result of spelling test in white schools.*

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
<b>Blossom Street School:</b>									
Grade II.....	23	181	78.7	27	233	86.2	50	414	82.8
Grade III.....	13	74	56.9	18	151	83.8	31	225	72.5
Grade IV.....	13	72	55.3	18	110	61.1	31	182	58.7
Grade V.....	6	52	86.6	18	134	74.4	24	186	77.5
Grade VI.....	5	35	70.0	4	35	87.5	9	70	77.7
<b>Total.....</b>	<b>60</b>	<b>414</b>	<b>69.0</b>	<b>85</b>	<b>663</b>	<b>78.0</b>	<b>145</b>	<b>1,077</b>	<b>74.3</b>
<b>Granby School:</b>									
Grade II.....	3	27	90.0	9	72	80.0	12	99	82.5
Grade III.....	7	60	85.7	4	31	77.5	11	91	82.7
<b>Total.....</b>	<b>10</b>	<b>87</b>	<b>87.0</b>	<b>13</b>	<b>103</b>	<b>79.2</b>	<b>23</b>	<b>190</b>	<b>82.6</b>

<sup>1</sup>Ayres, L. P. A Measuring Scale for Ability in Spelling. Russell Sage Foundation, New York, 1915.

## Result of spelling test in white schools—Continued.

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
<b>Logan School:</b>									
Grade II.....	53	385	72.6	63	529	84.0	116	914	79.6
Grade III.....	81	559	69.0	66	534	81.0	147	1,093	74.3
Grade IV.....	58	374	65.0	62	464	75.0	120	838	69.8
Grade V.....	42	303	72.0	48	368	77.0	90	671	74.5
Grade VI.....	29	216	74.0	41	341	83.0	70	557	79.5
Grade VII.....	29	187	65.0	36	287	80.0	65	474	72.9
Total.....	292	2,024	69.0	316	2,523	80.0	608	4,547	74.7
<b>McMaster School:</b>									
Grade II.....	36	217	60.0	51	331	64.9	87	548	63.0
Grade III.....	45	314	69.7	37	256	69.2	82	570	69.5
Grade IV.....	40	277	69.2	37	255	68.9	77	532	69.0
Grade V.....	33	258	78.1	35	278	79.4	68	536	78.8
Grade VI.....	39	280	71.8	25	192	71.8	64	472	73.7
Grade VII.....	28	201	71.8	28	209	74.4	56	410	73.2
Total.....	221	1,547	70.0	213	1,521	71.4	434	3,068	70.7
<b>Shandon School:</b>									
Grade II.....	14	118	84.0	16	117	73.0	30	235	78.3
Grade III.....	27	191	71.0	18	141	78.0	45	332	73.7
Grade IV.....	26	193	74.0	21	148	70.0	47	341	72.5
Grade V.....	15	123	82.0	13	90	69.0	28	213	76.0
Grade VI.....	10	75	75.0	15	129	86.0	25	204	81.6
Grade VII.....	9	67	74.0	11	98	89.0	20	165	82.5
Total.....	101	767	76.0	94	723	77.0	195	1,490	76.4
<b>Taylor School:</b>									
Grade II.....	37	221	59.0	38	286	75.0	75	507	67.6
Grade III.....	31	216	69.0	28	192	68.0	59	408	69.1
Grade IV.....	37	253	68.0	39	275	70.0	76	528	69.4
Grade V.....	26	196	75.0	33	269	81.0	59	465	78.7
Grade VI.....	22	167	76.0	28	235	84.0	50	402	80.0
Grade VII.....	9	71	78.0	22	158	71.0	31	229	74.2
Total.....	162	1,124	69.0	188	1,415	75.0	350	2,539	72.5
<b>Waverly School:</b>									
Grade II.....	15	76	63.0	17	126	73.0	32	202	63.1
Grade III.....	11	71	64.0	21	175	83.0	32	246	76.8
Grade IV.....	21	144	69.0	10	85	85.0	31	229	73.8
Grade V.....	8	52	65.0	13	83	64.0	21	135	64.3
Grade VI.....	6	38	63.0	4	25	63.0	10	63	63.0
Grade VII.....	11	74	67.0	9	54	60.0	20	128	64.0
Total.....	72	455	63.0	74	548	74.0	146	1,003	68.7
<b>High School:</b>									
Grade VIII.....	103	661	64.2	107	745	69.6	210	1,406	66.9
Total for all.....	1,021	7,079	69.3	1,090	8,241	75.6	2,111	15,320	72.5

## Result of spelling test in negro schools.

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
<b>Booker T. Washington School:</b>									
Grade II.....	32	222	69	81	567	70	113	789	69.8
Grade III.....	42	285	68	48	322	67	90	607	67.4
Grade IV.....	25	171	68	43	308	72	68	479	69.1
Grade V.....	10	69	69	28	218	78	38	287	75.5
Grade VI.....	11	68	65	25	189	76	36	257	71.4
Grade VII.....	3	21	70	12	89	74	15	110	73.3
Total.....	123	836	68	237	1,693	71	360	2,529	70.2



*Result of spelling test in negro schools—Continued.*

Schools and grades.	Boys.	Words correct.	Per cent correct.	Girls.	Words correct.	Per cent correct.	Total pupils.	Total words correct.	Per cent correct.
Howard School:									
Grade II.....	50	224	45	45	300	67	95	524	55.1
Grade III.....	61	220	36	72	393	55	133	613	46.0
Grade IV.....	30	233	78	56	408	73	86	641	74.5
Grade V.....	28	74	26	58	256	44	86	330	38.3
Grade VI.....	14	106	76	30	174	58	44	280	63.6
Grade VII.....	10	59	59	38	193	51	48	252	52.5
Grade VIII.....	13	78	60	47	323	69	60	401	66.8
Total.....	206	994	48	346	2,047	59	552	3,041	55.0
Total for all.....	329	1,830	58	583	3,740	65	912	5,570	61.0

*Summary of spelling test, distributed by grades.*

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blossom Street.	Granby.	Logan.	McMaster.	Shandon.	Taylor.	Waverley.	Booker T. Washington.	Howard.			
Second grade....	82.8	82.5	79.6	63.0	78.3	67.6	63.1	69.8	55.1	72.6	63.1	69.3
Third grade....	72.5	82.7	74.3	69.5	73.7	69.1	76.8	67.4	46.0	72.8	54.7	66.4
Fourth grade....	58.7	.....	69.8	69.0	72.5	69.4	73.8	69.1	74.5	69.3	72.1	70.1
Fifth grade....	77.5	.....	74.5	78.8	76.0	78.7	64.3	75.5	38.3	76.0	49.7	68.1
Sixth grade....	77.7	.....	79.5	73.7	81.6	80.0	63.0	71.4	63.6	77.5	67.1	74.8
Seventh grade....	.....	.....	72.9	73.2	82.5	74.0	64.0	73.3	52.5	73.7	57.4	69.3
Eighth grade....	.....	.....	.....	.....	.....	.....	.....	.....	66.8	66.9	66.8	66.9
All grades.	74.3	82.6	74.7	70.7	76.4	72.5	68.7	70.2	55.0	72.5	61.0	69.1

## OBSERVATIONS ON THE SPELLING TEST.

In giving the test, taking the system as a whole, 30,230 words were dictated, of which number 20,890, or 69.1 per cent, were spelled correctly. Taking the average of 73 per cent correct among the cities where the test has been given under the same conditions as a standard, it is seen that for the entire system Columbia fell short by nearly 4 points. The averages of several of the schools, however, passed the standard; the Blossom Street, Granby, Logan, and Shandon Schools, for example. The Taylor almost reached the standard, while the McMaster, the Waverley, the eighth grade in the high school, and both of the negro schools fell below, one of the latter, the Howard, being so low as to suggest the need of a radical overhauling of the work of the school.

All of the white schools, regarded as a group, reached 72.5 per cent of accuracy; whereas the negro schools fell below the score made by the white children by 11 points. Here again, however, the Howard School brings down the negro rating seriously. The Booker T. Washington School, indeed, as compared with other schools of the

system, stands well, having a 70 per cent rating for all grades taken together. This places it in the same scholarship group with the Waverley School, the McMaster School, and the eighth grade of the high school.

As to the grades taken separately, but for the system as a whole, only one reached the standard average of 73 per cent, the sixth grade, though, if the white children be separated from the negroes, the scores of the fifth, sixth, and seventh grades are seen to have passed this standard, while the second and third grades are but a fraction lower. In one school, the Shandon, every grade reached or passed the standard. Among the white children the lowest score was made by the eighth grade, it having an accuracy rating of 66.9 per cent, being 3 points below the next lowest grade and nearly 6 points below the average of the white schools.

A comparison between the boys and girls of the system as to relative standing is interesting. Among the white schools of the city 10,210 words were dictated to the boys, and 7,079 were spelled correctly, or 69.3 per cent. To the girls were dictated 10,900 words, and 8,241 were spelled correctly, or 75.6 per cent. The white boys fell short of the standard, then, by 3.7 per cent, whereas the girls passed the standard by almost as many points. In but one school, the Granby, did the boys excel the girls. It is notable that with but one exception in all of the white schools the girls exceeded the standard score, whereas the boys fell short in all but two schools. In the negro schools the girls likewise outranked the boys, though neither reached the standard score of 73 per cent correct in either of the schools.

The showing made in this test is very creditable; however, inasmuch as a school department should ever strive to better its work, it is suggested that this can be accomplished, judging by the results of the test, by giving special attention to the work of the following grades:

Blossom Street School.....	Third and fourth grades.
Logan School.....	Fourth grade.
McMaster School.....	Second, third, and fourth grades.
Taylor School.....	Second, third, and fourth grades.
Waverley School.....	Second, fifth, sixth, and seventh grades.
High School.....	Eighth grade.
Booker T. Washington School (negro).....	Second, third, fourth, and sixth grades.
Howard School (negro).....	All grades except the fourth.

The range of variation as between the lowest and highest scores gained by each grade in the system is large, indicating that the spelling work of the system is in need of coordination. In the second grade, the white schools alone considered, this variation is 20 points; in the third grade, 4 points; in the fourth and fifth grades, 15 points each; and in the sixth and seventh grades, 18 points each. Were the efficiency of the work in the grades which are listed as being in need

of special attention brought up to the suggested standard, this wide variation in results would be eliminated.

Within the limits, too, of each school the range of variation is nearly as great, showing that each school, taken as a unit, is in need of closer supervision. For example, the variation between the highest and lowest grade scores in the Blossom Street School is 24 points; in the Granby the two classes are together in their rating; in the Logan the range is 10 points; in the McMaster, 16 points; in the Shandon, 10 points; in the Taylor, 12 points; and in the Waverley, 13 points. Of course, were the grades broken up into class units in every instance, the range of variation would be considerably increased. With close supervision, however, it will not be difficult to eliminate this variation by raising the grades which are weakest nearer to the standard score.

#### B. THE COURTIS ARITHMETIC TEST.

The most widely used test for judging of the efficiency of schools and classes in the operations of addition, subtraction, multiplication, and division with integers is that devised by Dr. S. A. Courtis, of Detroit. By testing thousands of children of all grades and in all types of schools throughout the country, he has formulated a standard of attainment in both speed and accuracy by which other schools can be rated.

The series consists of four tests printed on a four-page folder, one test to each page. Twenty-four examples of equal difficulty are given in each. A time limit is set for each test, 8 minutes for the addition test, 4 minutes for the subtraction, 6 minutes for the multiplication, and 8 minutes for the division test. Within these respective time limits each pupil tested is required to solve as many examples as he can. The papers are then marked for the number attempted (speed) and for the number which are correct (accuracy). In order that all tests may be standardized, no credit is given for examples incomplete or partially correct. The following are sample exercises of the four tests, the remaining examples of each are of equal difficulty:

#### *Test No. 1. Addition (8 minutes).*

927	297	136	486	384	176	277	837
379	925	340	765	477	783	445	882
756	473	988	524	881	697	682	959
837	983	386	140	266	200	594	603
924	315	353	812	679	366	481	118
110	661	904	466	241	851	778	781
854	794	547	355	796	535	849	756
965	177	192	834	850	323	157	222
344	124	439	567	733	229	953	525

*Test No. 2. Subtraction (4 minutes).*

115364741	67298125	92057352	113380936
<u>80195261</u>	<u>29346861</u>	<u>42689037</u>	<u>42556840</u>

*Test No. 3. Multiplication (6 minutes).*

3876	9245	7368	2594	6495
<u>93</u>	<u>86</u>	<u>74</u>	<u>25</u>	<u>19</u>

*Test No. 4. Division (8 minutes).*

37)14467	86)60372	94)67774	25)9750
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## THE RESULTS OF THE TEST IN COLUMBIA.

The test was given in Columbia early in 1918 to pupils of the fifth, sixth, seventh, and eighth grades, who were just completing the first semester's work of the schools. In all, 1,229 pupils, 897 white and 332 negro, were tested. The tables which follow show the number of attempts which were made by each grade. Instead of giving the average number of attempts made by the pupils of each class, the median number is given. The median, it should be explained, is the middle point in a series or the point above which there are just as many as there are below it. Thus, for example, if five pupils work, respectively, 3, 5, 6, 9, and 11 problems, the median number worked would be that number which was solved by the pupil who stood at the middle point of the series, i. e., at 6. This is a better way of expressing the "central tendency" of the group than through the use of the average or arithmetical mean and is employed now in statistical work much more frequently.

## THE RATE OF SPEED.

These tables show how the pupils divide up in the number of examples which were attempted. For example, in the addition test of the eighth grade of the white schools, 4 pupils attempted 3 examples each, 14 attempted to work 4 each, 18 pupils attempted 5 each, etc. The "central tendency" of the class as a whole, called the "median," was 8.1 examples attempted. The results in all four tests are shown for white children and negro children grouped separately and for the two grouped together, which gives, for purposes of comparison, the accomplishment of the system as a whole as to speed.



Division attempts (time, 8 minutes).

Grades.	Total pupils.	Attempts.																			Median.
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19	20	
White:																					
VIII.....	204			2	8	21	30	34	27	32	13	18	7	6	3	...	1	1	1	7.2	
VII.....	194	1		6	18	39	26	19	24	19	22	8	9	1	1	1	...	...	...	7.4	
VI.....	217	2	5	35	41	47	30	19	13	9	8	5	1	1	1	...	...	...	...	5.5	
V.....	282	2	16	50	72	72	33	11	11	10	2	2	1	...	...	...	...	...	...	5.0	
Negro:																					
VIII.....	58	1	1	3	11	15	12	4	1	3	3	...	...	...	...	...	...	...	...	4.5	
VII.....	66	2	7	8	8	15	10	9	...	4	1	1	...	...	...	...	...	...	...	4.5	
VI.....	80	3	19	18	9	20	4	...	2	3	1	...	1	...	...	...	...	...	...	4.0	
V.....	128	8	43	45	16	12	4	...	...	...	...	...	...	...	...	...	...	...	...	3.3	
White and negro:																					
VIII.....	262	1	1	5	19	36	42	38	31	33	16	21	7	6	3	...	1	1	1	6.7	
VII.....	260	2	8	8	14	33	49	35	19	28	20	23	8	9	2	1	1	...	...	6.5	
VI.....	297	3	21	23	44	61	51	30	21	16	10	8	6	1	1	1	...	...	...	4.9	
V.....	410	8	45	61	66	84	76	33	11	11	10	2	2	1	...	...	...	...	...	4.3	

THE DEGREE OF ACCURACY.

Obviously the number of problems attempted gives no clue to the degree of accuracy; and this alone, then, is not a fair test of the efficiency of the work of a system, for educationally it is better to attempt fewer examples and do them correctly than to try a great many but to have a low score in accuracy. To judge fairly, then, of the work, the degree of accuracy with which the work is done must also be taken into account. The following tables show the degree of accuracy attained by the several grades in the four tests. In the addition test, for example, of 204 white children in the eighth grade 49 of them did not work correctly more than 49 per cent of the problems which they attempted; 40 fell within a range of 50 to 60 per cent right; 32 attained a range of from 60 to 70 per cent right; while the "central tendency" of the class is 64 per cent correct.

Addition test—Percentage of accuracy.

Grades.	Total papers.	0-49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII.....	204	49	40	32	28	33	2	20	64.0
VII.....	194	41	39	24	31	42	3	14	67.0
VI.....	217	53	42	37	29	25	0	31	64.0
V.....	282	90	45	41	40	35	2	29	61.4
Negro:									
VIII.....	58	26	9	9	2	6	0	6	53.3
VII.....	66	25	14	11	4	7	...	5	55.7
VI.....	80	37	14	11	4	7	1	6	52.1
V.....	128	75	19	13	6	4	0	11	47.5
White and Negro:									
VIII.....	262	75	49	41	30	39	2	26	61.7
VII.....	260	66	53	35	35	49	3	19	63.1
VI.....	297	90	56	48	33	32	1	37	60.0
V.....	410	165	64	54	46	39	2	40	56.2

*Subtraction test—Percentage of accuracy.*

Grades.	Total papers.	0-49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII.....	204	24	23	37	29	49	13	29	76.2
VII.....	194	19	12	29	35	45	18	36	80.0
VI.....	217	33	20	31	36	53	12	32	76.9
V.....	282	58	38	34	35	61	5	51	73.1
Negro:									
VIII.....	58	15	11	17	8	7	0	0	61.8
VII.....	66	22	14	11	9	9	1	0	58.0
VI.....	80	35	17	11	5	8	1	3	53.0
V.....	128	87	20	3	6	7	0	5	47.4
White and Negro:									
VIII.....	262	39	34	54	37	56	13	29	71.0
VII.....	260	41	26	40	44	54	19	36	75.2
VI.....	297	68	37	42	41	61	13	35	70.0
V.....	410	145	58	37	41	68	5	56	60.0

*Multiplication test—Percentage of accuracy.*

Grades.	Total papers.	0-49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII.....	204	47	29	51	28	34	2	13	65.1
VII.....	194	31	21	23	35	54	6	24	76.3
VI.....	217	45	30	39	29	40	5	29	68.7
V.....	282	76	36	43	34	51	1	41	66.7
Negro:									
VIII.....	58	18	14	12	5	6	0	3	58.0
VII.....	66	33	7	10	6	7	0	3	50.0
VI.....	80	31	16	14	8	6	0	5	55.6
V.....	128	90	16	9	4	3	0	6	47.2
White and Negro:									
VIII.....	262	65	43	63	33	40	2	26	63.6
VII.....	260	64	28	33	41	61	6	27	71.2
VI.....	297	76	46	53	37	46	5	34	65.0
V.....	410	166	52	52	38	54	1	47	57.5

*Division test—Percentage of accuracy.*

Grades.	Total papers.	0-49 per cent correct.	50 per cent correct.	60 per cent correct.	70 per cent correct.	80 per cent correct.	90 per cent correct.	100 per cent correct.	Median accuracy.
White:									
VIII.....	204	23	17	22	14	41	4	83	86.3
VII.....	194	10	8	18	23	55	11	69	86.9
VI.....	217	19	13	31	28	41	6	79	84.4
V.....	282	66	39	40	33	41	1	62	69.0
Negro:									
VIII.....	58	21	5	9	7	7	1	8	63.3
VII.....	66	27	6	10	3	5	0	15	60.0
VI.....	80	32	11	6	7	0	0	24	57.2
V.....	128	101	11	1	1	1	0	13	42.7
White and Negro:									
VIII.....	262	44	22	31	21	48	5	91	82.7
VII.....	260	37	14	28	26	60	11	84	84.1
VI.....	297	51	26	37	35	41	6	103	80.0
V.....	410	167	50	41	34	42	1	75	57.6

STANDARDS OF COMPARISON.

The foregoing figures mean very little until they are compared and contrasted with recognized standards of achievement. There are at hand data gathered through the use of this test extending over a

period of several years which indicate what other schools are able to do in these fundamental operations of arithmetic. These standards as summarized by Monroe, DeVoss, and Kelly<sup>1</sup> comprise three: (1) General median scores based upon the tabulation of many thousands of individual scores in tests given in 1915-16; (2) the standards proposed by Curtis after three years' use of these tests; (3) the median scores of the Boston system after the use of the test for three years.

The table which follows shows the results of the test in Columbia compared with these standards and also with the results obtained in connection with the survey of the San Francisco schools.

*Columbia in comparison.*

ADDITION.

Grades.	General standard.		Curtis standard.		Boston.		San Francisco. <sup>1</sup>			Columbia.						
	Speed. <sup>2</sup>	Accuracy. <sup>3</sup>	Speed. <sup>2</sup>	Accuracy.	Speed. <sup>2</sup>	Accuracy.	Speed. <sup>2</sup>	Accuracy.	Examples correct.	The system.			Whites.		Negroes.	
										Speed. <sup>2</sup>	Accuracy.	Examples correct.	Speed. <sup>2</sup>	Accuracy.	Speed. <sup>2</sup>	Accuracy.
VIII.....	11.6	76.0	12	100	12	80	11.9	74.8	8.9	7.6	61.7	4.7	8.1	64.0	6.0	53.3
VII.....	10.9	75.0	11	100	11	80	9.7	69.8	6.8	7.5	63.1	4.7	8.0	67.0	5.9	55.7
VI.....	9.8	73.0	10	100	10	70	10.3	74.1	7.6	6.8	60.0	4.0	7.4	64.0	5.2	52.1
V.....	8.6	70.0	8	100	9	70	8.2	75.3	6.0	5.8	56.2	3.3	6.4	61.4	4.6	47.5

SUBTRACTION.

VIII.....	12.9	87.0	13	100	12	90	13.9	90.9	12.6	9.6	71.0	6.8	9.9	76.2	8.6	61.8
VII.....	11.6	86.0	12	100	11	90	12.5	85.1	10.7	9.4	75.2	7.0	9.8	80.0	8.7	58.0
VI.....	10.3	85.0	11	100	10	90	11.4	84.2	9.6	8.3	70.0	5.8	9.0	76.9	6.3	53.0
V.....	9.0	83.0	9	100	9	80	9.1	82.6	7.5	6.7	60.0	4.0	7.4	73.1	5.8	47.4

MULTIPLICATION.

VIII.....	11.5	81.0	11	100	11	80	10.5	76.0	8.0	7.0	63.6	4.5	7.8	65.1	5.8	58.0
VII.....	10.2	80.0	10	100	10	80	9.1	74.0	6.7	7.8	71.2	5.6	8.3	76.3	5.9	50.0
VI.....	9.1	78.0	9	100	9	80	8.8	78.7	6.9	6.4	65.0	4.2	6.8	68.7	4.3	55.6
V.....	7.5	75.0	8	100	7	70	6.8	66.9	4.5	5.6	57.5	3.2	6.2	66.7	3.3	47.2

DIVISION.

VIII.....	10.7	91.0	11	100	11	90	9.6	89.2	8.6	6.7	82.7	5.5	7.2	86.3	4.5	63.3
VII.....	9.6	90.0	10	100	10	90	8.1	80.3	6.5	6.5	84.1	5.5	7.4	86.9	4.5	60.0
VI.....	8.2	87.0	8	100	8	80	7.6	74.7	5.7	4.9	80.0	3.9	5.5	84.4	4.0	57.2
V.....	6.1	77.0	6	100	6	70	4.7	57.0	2.7	4.3	57.6	2.5	5.0	69.0	3.3	42.7

<sup>1</sup> From the San Francisco survey.

<sup>2</sup> Speed is the number of examples attempted in the prescribed time.

<sup>3</sup> Accuracy is the per cent of examples correct.

OBSERVATIONS ON THE CURTIS TEST.

It will be easier to understand Columbia's showing in this test if the essential facts of the preceding table be arranged somewhat dif-

<sup>1</sup> Monroe, DeVoss, and Kelly. *Educational Tests and Measurements*, 1917, pp. 35-40.



ferently. In the columns headed "General standard" medians are given which express the results obtained by Curtis himself in testing thousands of children in many school systems in various parts of the country. To compare the results of the test of the Columbia system with this standard the facts may be stated in the following way:

*Addition test.*

<i>General standard.</i>		<i>Columbia system.</i>
The eighth grades attempted 11.6 examples, solving 8.8 examples.	ex-	The eighth grades attempted 7.6 examples, solving 4.7 examples.
The seventh grades attempted 10.9 examples, solving 8.1 examples.	ex-	The seventh grades attempted 7.5 examples, solving 4.7 examples.
The sixth grades attempted 9.8 examples, solving 7.1 examples.	examples,	The sixth grades attempted 6.8 examples, solving 4 examples.
The fifth grades attempted 8.6 examples, solving 6 examples.	examples,	The fifth grades attempted 5.8 examples, solving 3.3 examples.

*Subtraction test.*

The eighth grades attempted 12.9 examples, solving 11.2 examples.	ex-	The eighth grades attempted 9.6 examples, solving 6.8 examples.
The seventh grades attempted 11.6 examples, solving 9.9 examples.	ex-	The seventh grades attempted 9.4 examples, solving 7 examples.
The sixth grades attempted 10.3 examples, solving 8.8 examples.	examples,	The sixth grades attempted 8.3 examples, solving 5.8 examples.
The fifth grades attempted 9 examples, solving 7.4 examples.	examples,	The fifth grades attempted 6.7 examples, solving 4 examples.

*Multiplication test.*

The eighth grades attempted 11.5 examples, solving 9.3 examples.	ex-	The eighth grades attempted 7 examples, solving 4.5 examples.
The seventh grades attempted 10.2 examples, solving 8.1 examples.	ex-	The seventh grades attempted 7.8 examples, solving 5.6 examples.
The sixth grades attempted 9.1 examples, solving 7 examples.	examples,	The sixth grades attempted 6.4 examples, solving 4.2 examples.
The fifth grades attempted 7.5 examples, solving 5.6 examples.	examples,	The fifth grades attempted 5.6 examples, solving 3.2 examples.

*Division test.*

The eighth grades attempted 10.7 examples, solving 9.7 examples.	ex-	The eighth grades attempted 6.7 examples, solving 5.5 examples.
The seventh grades attempted 9.6 examples, solving 8.6 examples.	ex-	The seventh grades attempted 6.5 examples, solving 5.5 examples.
The sixth grades attempted 8.2 examples, solving 7.1 examples.	examples,	The sixth grades attempted 4.9 examples, solving 3.9 examples.
The fifth grades attempted 6.1 examples, solving 4.7 examples.	examples,	The fifth grades attempted 4.3 examples, solving 2.5 examples.

This test has not before been given officially in any city having as large a negro population as has Columbia. Consequently it is not possible to estimate with any degree of accuracy how far this factor operates in affecting the ranking of the city in comparison with other cities. The city of Butte, Mont., comes as near being comparable to Columbia in size and in general character as any city where the results of the test are of record. When the test was given in Butte the city had a population somewhat in excess of 40,000. While 70 per cent of the population was white, it was made up of the foreign born and

those of direct foreign descent. While the characteristics of the respective populations of the two cities are totally different, they are alike in that they both introduce elements of difficulty in school work. A comparison of the results of the test in the two places will be of interest, though it would scarcely be fair to either city to consider the comparison too seriously.

The records of the Butte test do not give the number of problems attempted; so a comparison can be made on the basis only of the number which were correctly solved. This comparison, expressed in terms of the median score of each grade, follows:

*Comparison with the Butte system in examples correctly finished.*

	Addition test.		Subtraction test.		Multiplication test.		Division test.	
	Butte.	Columbia.	Butte.	Columbia.	Butte.	Columbia.	Butte.	Columbia.
VIII.....	5.3	4.7	9.8	6.8	8.1	4.5	10.2	5.5
VII.....	3.8	4.7	7.1	7.0	6.5	5.6	7.2	5.5
VI.....	3.4	4.0	5.8	5.8	5.0	4.2	4.3	3.9
V.....	2.9	3.3	5.5	4.0	4.1	3.2	3.6	2.5

To show where the weakest spots of the Columbia system are, as shown by the Courtis test, a table setting forth the standing made by the several schools of the system follows:

*Columbia schools compared.*

ADDITION.

Grades.	Examples.	White schools.						Negro schools.	
		Blossom Street.	Logan.	McMaster.	Shandon.	Taylor.	Waverley.	High School.	Boo'cor T. Washington.
VIII.....	Examples attempted.....							8.1	5.9
	Percentage correct.....						64.0		53.0
VII.....	Examples attempted.....	8.3	8.1	7.3	8.4	6.9		4.8	6.2
	Percentage correct.....	66.8	66.8	65.0	67.0	75.0		55.0	56.0
VI.....	Examples attempted.....	7.5	7.1	7.4	6.3	8.4	6.7		4.9
	Percentage correct.....	52.5	70.0	62.7	56.4	67.5	55.0		61.6
V.....	Examples attempted.....	5.5	6.4	7.0	5.8	6.5	6.6		4.0
	Percentage correct.....	64.0	58.7	66.8	59.0	66.0	37.7		42.7

SUBTRACTION.

VIII.....	Examples attempted.....							9.9	8.4
	Percentage correct.....							76.2	57.5
VII.....	Examples attempted.....		10.1	9.4	9.7	8.9	10.9		5.3
	Percentage correct.....		75.3	82.6	76.2	93.0	76.0		53.3
VI.....	Examples attempted.....	8.3	9.6	9.0	9.0	9.1	8.0		9.9
	Percentage correct.....	75.0	81.0	80.0	81.0	68.1	65.0		53.7
V.....	Examples attempted.....	5.6	8.0	7.1	6.7	8.0	7.9		3.1
	Percentage correct.....	67.5	77.3	74.0	66.4	78.3	50.0		32.0

## MULTIPLICATION.

VIII.	Examples attempted.....							7.8	5.8
	Percentage correct.....							65.1	56.1
VII.	Examples attempted.....	8.5	7.6	7.9	9.1	8.2			6.0
	Percentage correct.....	73.7	74.3	78.7	81.3	73.3			43.6
VI.	Examples attempted.....	6.3	6.8	6.4	7.0	7.5	5.5		4.3
	Percentage correct.....	49.0	70.0	68.5	68.3	68.7	57.5		52.5
V.	Examples attempted.....	5.0	6.2	6.3	5.4	6.7	5.8		3.1
	Percentage correct.....	79.9	64.4	77.2	61.0	67.0	37.7		44.3

## DIVISION.

VIII.	Examples attempted.....							7.2	4.8
	Percentage correct.....							86.3	63.3
VII.	Examples attempted.....	6.9	6.7	8.1	9.7	6.8			3.9
	Percentage correct.....	89.1	80.9	86.1	100.0	88.3			43.6
VI.	Examples attempted.....	4.6	5.9	5.3	7.5	5.0	4.2		3.2
	Percentage correct.....	85.0	85.9	82.5	91.0	80.0	68.3		52.8
V.	Examples attempted.....	4.2	4.7	4.7	4.5	6.2	4.5		1.7
	Percentage correct.....	68.0	71.5	60.0	65.0	70.0	37.7		35.0

Granting to principals the time and the authority to supervise the work of their schools and holding them responsible for results; initiating frequent comparative tests given from time to time by the superintendent and supervisors to find out how the work is going; devising a methodology for dealing effectively with the drill phases of school work; and constructive supervision intelligently exercised, will operate to lift this branch of the work of Columbia's system speedily to a worthy place among the schools and cities whose attainments afford a reasonable standard for all.

## C. THE REASONING TEST IN ARITHMETIC.

No very satisfactory tests for measuring the ability of pupils to solve problems involving reasoning have been devised. The most widely used is that worked out by Stone.<sup>1</sup> Stone himself used it in testing the 6 A grades of 26 cities. It has been used also in a number of city school surveys; so that results gotten in many places are of record, affording fairly definite standards of what is to be expected from its use. The test contains 12 problems graduated in difficulty and having a varying credit value dependent upon their difficulty. The time allowance for the test is exactly 15 minutes.

While Stone's plan for marking the papers allows credit for examples partly right and for examples which are not completed, nevertheless, in order that conditions under which the papers are marked may not be subject to variation due to the variation in the values which different examiners would give such papers, it has been the practice in most recent surveys to allow no credit for problems which are only partly correct or which are incomplete. Thus, for example, in the Butte (Mont.) survey, in the survey of the schools of Salt Lake City, in the survey of the schools of San Francisco, and in

<sup>1</sup> Stone, C. W. Standardized Reasoning Tests in Arithmetic. Teachers College, Columbia University. 1916.

that of the schools of Janesville, Wis., in each of which the Stone test was used, the problems were marked on the basis only of right or wrong answers. In order that Columbia might be compared with these cities in the results obtained, this method of marking was employed.

The test, with the value given to each problem, follows:

THE STONE REASONING TEST.

(Solve as many of the following problems as you have time for; work them in order as numbered.)

1. If you buy 2 tablets at 7 cents each and a book for 65 cents, how much change should you receive from a two-dollar bill? (1.0.)
2. John sold 4 Saturday Evening Posts at 5 cents each. He kept one-half the money and with the other half he bought Sunday papers at 2 cents each. How many did he buy? (1.0.)
3. If James had 4 times as much money as George, he would have \$16. How much money has George? (1.0.)
4. How many pencils can you buy for 50 cents at the rate of 2 for 5 cents? (1.0.)
5. The uniforms for a baseball nine cost \$2.50 each. The shoes cost \$2 a pair. What was the total cost of uniforms and shoes for the nine? (1.0.)
6. In the schools of a certain city there are 2,200 pupils; one-half are in the primary grade, one-fourth in the grammar grades, one-eighth in the high school, and the rest in the night school. How many pupils are there in the night school? (1.4.)
7. If  $3\frac{1}{2}$  tons of coal cost \$21, what will  $5\frac{1}{2}$  tons cost? (1.2.)
8. A news dealer bought some magazines for \$1. He sold them for \$1.20, gaining 5 cents on each magazine. How many magazines were there? (1.6.)
9. A girl spent one-eighth of her money for car fare, and three times as much for clothes. Half of what she had left was 80 cents. How much money did she have at first? (2.0.)
10. Two girls receive \$2.10 for making buttonholes. One makes 42, the other 28. How shall they divide the money? (2.0.)
11. Mr. Brown paid one-third of the cost of a building; Mr. Johnson paid one-half the cost. Mr. Johnson received \$500 more annual rent than Mr. Brown. How much did he receive? (2.0.)
12. A freight train left Albany for New York at 6 o'clock. An express train left on the same track at 8 o'clock. It went at the rate of 40 miles an hour. At what time of day will it overtake the freight train if the freight train stops after it has gone 56 miles? (2.0.)

*Results of the reasoning test in white schools.*

Schools and grades.	Number of pupils.	Total examples attempted.	Total examples right.	Percentage of accuracy.	Total credits.	Average credits per pupil.	Average examples attempted per pupil.	Average examples right per pupil.
Blossom Street School:								
Grade V.....	24	160	76	47.5	78.0	3.2	6.6	3.1
Grade VI.....	9	57	35	61.4	36.2	4.0	6.3	4.0
Grade VII.....								
Total.....	33	217	111	51.1	114.2	3.4	6.6	3.3

*Results of the reasoning test in white schools—Continued.*

Schools and grades.	Number of pupils.	Total examples attempted.	Total examples right.	Percentage of accuracy.	Total credits.	Average credits per pupil.	Average examples attempted per pupil.	Average examples right per pupil.
Logan School:								
Grade V.....	89	406	275	67.7	294.6	3.3	4.5	3.0
Grade VI.....	65	489	304	62.1	331.0	5.0	7.5	4.6
Grade VII.....	67	540	396	73.3	432.0	6.4	8.0	5.9
Total.....	221	1,435	975	67.9	1,057.6	4.7	6.4	4.4
McMaster School:								
Grade V.....	68	428	195	45.5	202.4	2.9	6.0	2.8
Grade VI.....	62	428	297	70.5	317.0	5.1	6.9	4.7
Grade VII.....	54	444	311	70.0	349.2	6.4	8.2	5.8
Total.....	184	1,300	703	54.0	868.6	4.7	7.0	3.8
Shandon School:								
Grade V.....	36	170	89	52.3	90.6	2.5	4.7	2.4
Grade VI.....	25	176	118	67.0	124.0	5.0	7.0	4.7
Grade VII.....	20	183	122	66.6	142.8	7.1	9.1	6.1
Total.....	81	529	329	62.1	357.4	4.4	6.5	4.0
Taylor School:								
Grade V.....	52	309	175	56.6	178.2	3.4	5.9	3.3
Grade VI.....	49	358	230	64.2	247.6	5.0	7.3	4.7
Grade VII.....	33	220	164	74.5	177.6	5.3	6.6	5.0
Total.....	134	887	569	64.1	603.4	4.5	6.6	4.2
Waverley School:								
Grade V.....	19	109	48	44.0	48.4	2.5	5.7	2.5
Grade VI.....	11	70	54	77.1	58.0	5.2	6.3	4.7
Grade VII.....	20	154	104	67.5	120.0	6.0	7.7	5.2
Total.....	50	333	206	61.8	226.4	4.5	6.6	4.0
High school:								
Grade VIII.....	197	1,270	998	78.5	1,075.2	5.4	6.4	5.0
Total for all.....	900	5,971	3,891	65.1	4,302.8	4.7	6.6	4.3

*Results of the reasoning test in negro schools.*

Schools and grades.	Number of pupils.	Total examples attempted.	Total examples right.	Percentage of accuracy.	Total credits.	Average credits per pupil.	Average examples attempted per pupil.	Average examples right per pupil.
Booker T. Washington School:								
Grade V.....	38	124	62	50.0	65.0	1.7	3.2	1.6
Grade VI.....	35	140	92	65.7	108.5	3.1	4.0	2.6
Grade VII.....	13	82	57	69.5	59.8	4.6	6.3	4.4
Total.....	86	346	211	60.9	233.3	2.7	4.0	2.4
Howard School:								
Grade V.....	86	388	89	23.0	89.0	1.0	4.5	1.0
Grade VI.....	44	235	99	42.1	101.4	2.3	5.3	2.2
Grade VII.....	48	251	148	58.9	148.8	3.1	5.2	3.1
Grade VIII.....	58	266	180	67.6	185.7	3.2	4.6	3.1
Total.....	236	1,140	516	45.2	524.9	2.2	4.8	2.1
Total for all.....	322	1,486	727	48.9	758.2	2.3	4.6	2.2

*Columbia schools compared in average examples per pupil attempted and right.*<sup>1</sup>

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blos-som Street.	Logan.	Mc-Master.	Shan-don.	Tay-lor.	Wav-erley.	High School.	Book-er T. Wash-ington.	How-ard.			
Fifth grade.....	6.6 3.1	4.5 3.0	6.0 2.8	4.7 2.4	5.9 3.3	5.7 2.5	.....	3.2 1.6	4.5 1.0	5.4 2.9	4.1 1.2	5.0 2.4
Sixth grade.....	6.3 4.0	7.5 4.6	6.9 4.7	7.0 4.7	7.3 4.7	6.3 4.7	.....	4.0 2.6	5.3 2.2	7.1 4.7	4.7 2.4	6.5 4.0
Seventh grade.....	..... .....	8.0 5.9	8.2 5.8	9.1 6.1	6.6 5.0	7.7 5.2	.....	6.3 4.4	5.2 3.1	7.9 5.6	5.4 3.3	7.3 5.1
Eighth grade.....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	6.4 5.0	..... .....	4.6 3.1	6.4 5.0	4.6 5.0	6.0 4.6
All grades.....	6.6 3.3	6.4 4.4	7.0 3.8	6.5 4.0	6.6 4.2	6.6 4.0	6.4 5.0	4.0 2.4	4.8 2.1	6.6 4.3	4.6 2.2	6.1 3.7

<sup>1</sup> The upper figures show the number attempted; the lower, the number right.

*Columbia schools compared in average accuracy.*<sup>1</sup>

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blos-som Street.	Logan.	Mc-Master.	Shan-don.	Tay-lor.	Wav-erley.	High School.	Book-er T. Wash-ington.	How-ard.			
Fifth grade.....	47.5	67.7	45.5	52.3	56.6	44.0	.....	50.0	23.0	54.2	29.5	48.1
Sixth grade.....	61.4	62.1	70.5	67.0	64.2	77.1	.....	65.7	42.1	65.7	50.9	62.9
Seventh grade.....	.....	73.3	70.0	66.6	74.5	67.5	.....	69.5	58.9	71.1	61.5	69.4
Eighth grade.....	.....	.....	.....	.....	.....	.....	78.5	.....	67.6	78.5	67.6	76.6
All grades.....	51.1	67.9	54.0	62.1	64.1	61.8	78.5	60.9	45.2	65.1	48.9	61.9

<sup>1</sup> Shown by the percentage of attempts which were right.

*Columbia schools compared in credits received.*<sup>1</sup>

Grades.	White schools.							Negro schools.		All white schools.	All negro schools.	The entire system.
	Blos-som Street.	Logan.	Mc-Master.	Shan-don.	Tay-lor.	Wav-erley.	High School.	Book-er T. Wash-ington.	How-ard.			
Fifth grade.....	3.2	3.3	2.9	2.5	3.4	2.5	.....	1.7	1.0	3.0	1.2	2.5
Sixth grade.....	4.0	5.0	5.1	5.0	5.0	5.2	.....	3.1	2.3	5.0	2.6	4.4
Seventh grade.....	.....	6.4	6.4	7.1	5.3	6.0	.....	4.6	3.1	6.3	3.4	5.6
Eighth grade.....	.....	.....	.....	.....	.....	.....	5.4	.....	3.2	5.4	3.2	4.9
All grades.....	3.4	4.7	4.7	4.4	4.5	4.5	5.4	2.7	2.2	4.7	2.3	4.1

<sup>1</sup> Grade averages only are given.

*Columbia compared with other cities in average credits per pupil.*

Cities.	V grades.		VI grades.		VII grades.		VIII grades.	
	Median pupil.	Average per pupil.	Median pupil.	Average per pupil.	Median pupil.	Average per pupil.	Median pupil.	Average per pupil.
Janesville, Wis. (15,000 pop.)	2.40	1.89	3.4	2.93	5.50	5.20	6.3	6.48
Butte, Mont. (40,000 pop.)	2.20	2.44	3.9	4.24	5.80	5.95	7.7	7.83
Salt Lake City	3.70	4.03	6.4	6.46	8.60	8.86	10.5	10.44
San Francisco	2.85	2.40	5.52	4.06	5.40	4.96	6.8	6.43
Columbia:								
White pupils		3.0		5.0		6.3		5.4
Negro pupils		1.2		2.6		3.4		3.2
Both		2.5		4.4		5.6		4.9

## OBSERVATIONS ON THE REASONING TEST.

Such a test as this throws light on two important phases of the arithmetic work of the schools, the rate of speed with which children work, and the accuracy of their work. Given the number of pupils in the classes and the number of examples attempted, and the average rate per pupil can easily be found. Given, in addition, the number of examples solved correctly, and the average of accuracy for classes, for grades, for schools, and for the entire system can be determined. The preceding tables show these facts for Columbia.

Based upon his experience in giving this test in 26 representative city school systems, Stone suggests the following as a tentative standard of accomplishment for the several grades:<sup>1</sup>

Of the fifth-grade pupils 80 per cent should reach or exceed 5.5 credits with 75 per cent accuracy.

Of the sixth-grade pupils 80 per cent should reach or exceed 6.5 credits with 80 per cent accuracy.

Of the seventh-grade pupils 80 per cent should reach or exceed 7.5 credits with 85 per cent accuracy.

Of the eighth-grade pupils 80 per cent should reach or exceed 9.0 per cent accuracy.

Judged by the standard set by Stone, the result of the test in the Columbia schools is disappointing in the credits received, in the number of problems attempted, and in the percentage of accuracy reached by the several grades. While Stone would allow credit for problems partly correct and partly finished, a method of grading not adopted by the committee, for reasons already mentioned, yet it was found in grading the papers that Stone's method would not have increased the averages except in very slight degree.

When, however, Columbia is compared with other cities in which the test has been given, wherein the same method of marking papers was employed, she appears to very much better advantage.

<sup>1</sup> Stone, C. W. *Standardized Reasoning Tests in Arithmetic*, p. 21.

Considering the score in average credits made by the white children alone, it is seen that the fifth, sixth, and seventh grades of the Columbia schools excel the corresponding grades of all of the cities of the preceding table except those of Salt Lake City. The eighth grade of Columbia, however, is the lowest of the eighth grades in all of the cities of the list. In this connection it should be pointed out that the eighth grade in Columbia is classed as a high-school grade and receives no formal instruction in arithmetic, although work is given in high-school mathematics. In the other cities of the list the eighth grades are in the elementary division of schools and probably receive definite drill in arithmetical processes.

When the Columbia system as a whole is compared with the entire systems of the cities of the list, the relative rank is, of course, not so high, for the poor success with which the negro schools met the test lowers the rating for the city considerably. Even with the negroes included, however, an examination of the preceding table will show that with the exception of the eighth grade all grades of the Columbia schools excelled the corresponding grades of the San Francisco schools.

By making reference to the foregoing tables, especially to those in which the several schools of the system are compared, information can be secured which will show where special work needs to be done in order that the several schools and grades may be brought up to a higher standard of excellence.



## VI.—THE HOLDING POWER OF THE SYSTEM COMPARES FAVORABLY WITH THAT OF OTHER SYSTEMS.

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Though many children fail to enter school, and, for reasons for which a system can not be held responsible, many withdraw after entering, nevertheless, in general, the drawing power of a given system, and its holding power as well, are legitimate criteria for judging, in part at least, of its efficiency.

### THE ACCURACY OF THE COLUMBIA SCHOOL CENSUS.

The Columbia school census, taken in February, 1918, shows that there are, between the ages of 6 and 21, a total of 7,938 children, of whom 4,898 are whites and 3,040 are negroes. Studies show that the ratio which the young people of these ages bear to the entire population is nearly constant among cities of the same general type throughout the country. According to the United States Census for 1910 this ratio in Chicago was 27.2 per cent; in Cleveland, 26.9 per cent; in Detroit, 26.4 per cent; in Pittsburgh, 27.5 per cent; and in St. Louis, 26.4 per cent. Corresponding figures for other cities of the same approximate characteristics and for other censuses run about the same. Thus, for example, Columbia's total population in 1910 was 26,319, while the children of the ages of 5 to 19, inclusive, numbered 7,125, or 27 per cent of the total, practically the same as that of other cities. If this ratio holds good to-day, and no reason is apparent why it should have changed materially during the time which has intervened, then, based on the school census returns, the present population of Columbia would not reach 30,000. The Census Bureau, however, credited Columbia with a population in 1915 of 34,058, determined by a method of estimating the growth of cities, which gives the minimum possibility rather than the maximum. By this same method of estimating growth, Columbia should have a population in 1918 of at least 39,000. If the same ratio between school age and total population holds now, then the school census should show at least 10,500 names, as against 7,938 actually enumerated.

A check on this conclusion can be gotten in this way: In 1910, according to the Federal statistics, 53.2 per cent of the children of Columbia 6 to 20 years of age were in school. In 1917 the total school enrollment reported by the school authorities was 6,104. If the ratio between those in and out of school is the same as in 1910,

the school census should show a total between the ages of 6 and 20 of about 11,500 children. While the proportion of children now in school as compared with those not enrolled may be somewhat greater than in 1910, due to an increased community interest in education, nevertheless, as no attempt has been made to enforce the act providing for compulsory school attendance of all of the ages of 8 to 14, inclusive, it is unlikely that this change in ratio is sufficient to affect the estimate seriously. It would seem, therefore, that had the school census enumerators succeeded in getting the names of all the children the list would have shown that there are now in Columbia at least 10,500 children between the ages of 6 and 21.

Still another check on this estimate of the number of children in Columbia between the ages of 6 and 21 can be employed. The Federal Census of 1910 shows that, of the children in Columbia between the ages of 6 and 14, 74 per cent were attending school, public and private. The 1917 school report of Columbia shows that in the public schools alone there were enrolled in the first eight grades, corresponding to the age period of 6 to 14 years, a total of 5,707 pupils. If the same percentage holds good, then this number is 74 per cent of the actual number of pupils in the city of these ages. That is to say, on the basis of this reasoning there should be about 7,700 pupils in Columbia between the ages of 6 and 14. According to the school census, however, there are only about 5,300, a number which is about one-third short of what should be expected. Furthermore, it must be remembered that there are quite a number of children of these ages in private and parochial schools, which would operate to increase the expectancy rather than decrease it.

But the final reason for thinking that the school census recently taken has fallen short of an enumeration of all of the children lies in the fact that in 1910 the Federal Census credits Columbia, with 7,272 children between the ages of 6 and 20 and 2,570 under 5 years, whereas the school census gives but 7,938 children for the age period of 6 to 21, inclusive, one year longer, and 3,596 for the period below 6; also one year longer than the division made by the Federal Census enumerators. That is, during the time which has elapsed since the Federal Census was taken, eight years, according to the school census there has been an increase, in the one case, of but 666 and of only 1,026 in the other. Part of this apparent increase, too, it must be remembered, is due to the fact that each period compared is one year longer in the case of the local school census. Columbia has surely grown more rapidly during the past eight years than these differences would indicate.

Looking at the matter, then, from all angles, it would seem a conservative conclusion that any discussion of Columbia's school prob-

lems which is based on data secured through the local school census should take into account an increase of about one-third in the totals therein given.

THE SUPERINTENDENT'S OPINION.

Supt. Dreher does not think there is an error in the census in excess of 2 per cent. Speaking of the population of Columbia, he says:

The population of Columbia in round numbers increased from 21,000 to 26,000 in the decade from 1900 to 1910, which shows an annual increase of 500. In the fall of 1915 Dr. S. B. Fishburne, health officer of the city, compiled a census record made out by men who were at work with him and who made house-to-house inspections in connection with their duties, and therefore have had experience in collecting data. Their figures gave 31,000 (exact 30,976) and a school population of 6,196. Here, again, we have an increase of 1,000 a year. During this period, however, Shandon, Waverley, and North Columbia were annexed, which probably accounts for an increase of 500 a year over the decade before.

In view of these figures I am unable to see how our population has increased from 26,000 in 1910 to 40,000 in 1918. My school reports for the past few years are based on 35,000, and my opinion is that this figure is more nearly correct than 40,000, although well-informed men here say that we have 40,000 in the city limits.

In regard to the accuracy of the school census I wish to say that I could scarcely select men who are more capable of making accurate returns than the men who did the work for us in March. Six of them were our own principals and high-school teachers, who were assigned to their own districts where possible; two others had been working in the post office for a number of years and understand clerical details thoroughly; the third was a man who was formerly in the retail furniture business on the installment plan, and therefore went all over the city in connection with his work. Again, this census was not rushed at all in view of the fact that the schools were closed and no pressure was brought upon the men to get through on a definite schedule time. They made return visits time and time again to get the information from homes that were previously unaccounted for. Doubtless some children were overlooked, but I can never bring myself to believe that as many as 3,500 were not enumerated.

A summary of the school census returns distributed as to race, age, sex, and attendance districts follows:

*Age distribution of white children in school—School census.*

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	(1)	
Waverley.....	135	129	264	1	7	31	30	24	20	21	23	32	20	25	9	8	6	5	1	1	264
Shandon.....	243	279	522	3	20	43	42	53	53	54	47	42	35	45	31	15	10	10	0	19	522
Taylor.....	293	351	644	0	26	68	52	76	71	54	60	62	47	40	21	21	25	7	4	10	644
Logan.....	443	482	925	10	53	80	111	117	105	96	95	81	62	43	28	24	11	6	0	3	925
McMaster.....	431	488	919	14	44	93	97	86	84	86	77	83	68	65	43	32	24	22	1	0	919
Blossom Street.....	205	264	469	7	32	61	64	48	51	53	34	48	23	21	11	8	2	5	1	0	469
Total.....	1,750	1,993	3,743	35	182	376	396	404	384	364	336	348	255	239	143	108	78	55	7	33	3,743

<sup>1</sup> Age not known.

Age distribution of white children not in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	( <sup>1</sup> )	
Waverley.....	63	37	100	8	12	2	1	0	4	0	0	3	0	9	12	14	15	12	7	1	100
Shandon.....	42	32	74	4	3	0	1	2	21	2	0	1	0	2	5	5	18	2	3	74	
Taylor.....	111	105	216	7	40	8	3	6	2	1	5	5	9	23	18	22	32	25	5	216	
Logan.....	164	167	331	20	34	13	7	7	8	4	9	13	20	40	37	51	24	40	3	331	
McMaster.....	124	109	233	17	37	29	9	5	2	5	6	8	6	15	25	33	18	21	6	233	
Blossom Street.....	120	81	201	10	23	8	6	4	9	4	6	13	20	24	16	20	10	18	8	201	
Total.....	624	531	1,155	66	149	51	27	24	46	16	26	43	55	113	113	145	104	134	31	1,155	

<sup>1</sup> Age not known.

Age distribution of negro children in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	( <sup>1</sup> )	
Waverley.....	196	298	494	7	38	41	55	58	37	45	45	37	41	39	24	12	8	3	0	4	494
Shandon.....	7	8	15	0	1	2	0	1	2	2	0	3	0	1	1	0	0	0	0	2	15
Taylor.....	71	88	159	0	10	14	6	16	16	10	19	27	12	10	9	8	1	0	1	0	159
Logan.....	170	209	379	20	32	27	49	44	61	32	27	31	24	15	7	6	2	0	0	2	379
McMaster.....	274	386	660	33	52	74	61	84	85	69	52	58	45	25	8	6	2	2	4	0	660
Blossom Street.....	230	320	550	9	56	63	60	58	65	58	53	38	32	21	14	10	2	5	1	5	550
Total.....	948	1,309	2,257	69	189	221	231	261	266	216	196	194	154	111	63	42	15	10	6	13	2,257

<sup>1</sup> Age not known.

Age distribution of negro children not in school—School census.

Schools.	Boys.	Girls.	Total.	Ages.																	Total.
				6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	( <sup>1</sup> )	
Waverley.....	64	81	145	1	14	6	3	3	2	2	4	5	8	6	22	18	22	16	12	1	145
Shandon.....	4	4	8	0	3	0	0	0	0	1	0	0	0	0	1	2	1	0	0	0	8
Taylor.....	39	31	70	0	4	4	3	6	1	5	6	4	4	6	2	11	5	3	1	5	70
Logan.....	84	63	147	7	5	4	2	3	2	1	9	9	21	26	15	21	10	11	0	1	147
McMaster.....	100	114	223	18	17	6	5	6	2	7	16	23	7	30	21	33	6	12	12	2	223
Blossom Street.....	93	97	190	3	9	6	1	4	2	3	7	13	10	25	26	22	21	30	6	2	190
Total.....	393	390	783	29	52	26	14	22	9	19	42	54	50	93	87	107	65	72	31	11	783

<sup>1</sup> Age not known.

Summary of the school census (6-21).

	Ages.																	Total.		
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	( <sup>1</sup> )			
Whites:																				
In school.....	35	182	376	396	404	384	364	336	348	255	239	143	108	78	55	7	33	3,743		
Not in school.....	66	149	51	27	24	46	16	26	43	55	113	113	145	104	134	31	12	1,155		
Total.....	101	331	427	423	428	430	380	362	391	310	352	256	253	182	189	38	45	4,898		
Negroes:																				
In school.....	69	189	221	231	261	266	216	196	194	154	111	63	42	15	10	6	13	2,257		
Not in school.....	29	52	26	14	22	9	19	42	54	50	93	87	107	65	72	31	11	783		
Total.....	98	241	247	245	283	275	235	238	248	204	204	150	149	80	82	37	24	3,040		
Grand total.....	199	572	674	668	711	705	615	600	639	514	556	406	402	262	271	75	69	7,938		

<sup>1</sup> Age not known.

*Children under 6 years of age—School census.*

Schools.	Whites.			Negroes.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Waverley.....	92	76	168	136	132	268
Shandon.....	101	92	193	3	1	4
Taylor.....	220	222	442	30	32	62
Logan.....	313	352	665	101	89	190
McMaster.....	239	242	481	171	164	335
Blossom Street.....	243	217	460	158	170	328
Total.....	1,208	1,201	2,409	599	588	1,187

## THE COMPULSORY SCHOOL-ATTENDANCE LAW.

In 1876 the Legislature of South Carolina passed a compulsory school-attendance law, applicable only to the city of Columbia and the County of Charleston, which required all persons within these limits to keep their children between 8 and 16 in school. This law was never enforced.

In recent years attempts have been made to get an attendance law passed for the State at large, but all efforts failed until 1915, when the general assembly passed a local-option law, which provides that the attendance of all children between the ages of 8 and 14, inclusive, in those districts adopting the measure, shall be compulsory under penalty of fine and imprisonment and which requires also that boards of trustees of districts adopting the act shall take a school census annually.

Not much interest was taken by the citizens of Columbia in the matter, for when the question of the adoption of the measure came before the people only 58 votes were cast; 57 of these favored the law, however, which shows that it caused no active opposition. Beyond the preliminary step of taking the school census, necessary in order that the nature of the problem may be better understood, the board has, as yet, not attempted to enforce the law.

That there is grave need for such a law and for its rigid enforcement is disclosed by the report of illiteracy among the pupils in Columbia who are of school age and who are not attending school. These returns were secured by the enumerators who took the recent school census. It may be added that, in interpreting what it means to be able to "read and write," the enumerators were instructed that the ability to write one's name and to read a simple sentence would satisfy the conditions. The following table shows the facts, as given by the school census:

*Illiterates between 6 and 21 years of age not in school.*

Schools.	Whites unable to read and write.	Negroes unable to read and write.
Waverley.....	24	39
Shandon.....	24	5
Taylor.....	36	22
Logan.....	47	14
McMaster.....	73	58
Blossom Street.....	48	43
Total.....	252	181

## PUPILS OF COMPULSORY AGE NOT IN SCHOOL.

Tables on page 158 show that there are 233 white children and 186 negro children of compulsory age, 8-14, who are not in school. If to these figures those of the sixth and seventh years who are not in school be added, the total would stand: White children, 448; negro children, 267. These figures would indicate that quite as large a proportion of negro children of these ages are in school as of the whites, which is surprising in view of local conditions. A check on the accuracy of these returns, however, can be obtained by comparing the census returns with the enrollment of pupils as shown by the school records. This comparison is shown in the following table:

*Age distribution of pupils enrolled in school compared with census totals.*

School population.	Ages.																(1)
	6	7	8	9	10	11	12	13	14	15	16-	17	18	19	20	21	
Whites:																	
Census.....	101	331	427	423	428	430	380	362	391	310	352	256	253	182	189	38	45
Enrolled.....	66	313	414	382	363	361	326	333	256	216	136	69	35	0	0	0	0
Not in school.....	35	18	13	41	65	69	54	29	135	94	216	187	218	182	189	38	45
Negroes:																	
Census.....	98	241	247	245	253	275	235	238	248	204	204	150	149	80	82	37	21
Enrolled.....	121	154	204	210	246	191	162	219	165	157	76	54	29	2	2	0	0
Not in school.....	0	87	43	35	37	84	73	19	83	47	128	96	120	78	80	37	24
Total not in school.....	35	105	56	76	102	153	127	48	218	141	344	283	338	260	269	75	69

<sup>1</sup> Age not known.

This table shows that of the children of the years 6 to 14 reported by the census, there are 459 white children and 461 negro children who are not in the public schools. That is to say, the census report as to the number of white children who are not in school checks up with the school reports, whereas in the case of the negro children it would appear that many parents have reported that their children were in school when, as a matter of fact, they were not. This is not surprising when it is recognized that many of the negro parents are ignorant and that they may have misunderstood the purpose of the

census enumerators in asking for this information. It would seem, therefore, in considering the housing problem confronting the board, that it will be safer to conclude that in the enforcement of the attendance of all of the ages of 6 to 14, provision will have to be made for an increase of about 450 children of each race. If the census returns should be increased a third, as the committee believes should be done to correct the census, then these figures would reach approximately 600 each.

#### ADDITIONAL ROOMS AND TEACHERS REQUIRED.

It is clear, then, that a strict enforcement of the attendance law would necessitate enlarging the department by 25 or 30 rooms at least, entailing the addition of as many teachers to the corps. Consolidations of small classes in certain schools could be effected, however, which would somewhat lessen the requirement.

The following table shows how these rooms should be distributed in order that the white pupils would be best accommodated:

*White children 6 to 14 not in school, distributed by attendance districts, according to school census.*

Schools.	Children not in school.	Additional rooms required.
Waverley.....	30	1
Shandon.....	34	1
Taylor.....	77	2
Logan.....	115	3
McMaster.....	109	3
Blossom Street and Granby.....	83	2
Total.....	448	12

#### A PLAN TO CARE FOR THE GROWTH OF THE SYSTEM.

To meet this situation, the committee recommends that the present system of seven grades in the elementary division and four grades in the high school be changed to a grouping of grades wherein the elementary division shall be limited to the first six years of the school course; the seventh, eighth, and ninth grades of the entire city be brought together at a central point, forming a junior high school; and the present high-school grades be extended to embrace the tenth, eleventh, and twelfth years, to be called the senior high school. Such a plan, ideally, calls for a junior high-school building, which should be at or near the geographical center of the city, near car lines which reach every part of the city, and yet at a point sufficiently removed from the senior high school so that the organization, the activities, and the entire school machinery shall be kept separate and distinct.

A division of the pupils of a system into these three groups, separating them in all of their school activities, is an arrangement which educationally can be abundantly justified.

Congregating the seventh, eighth, and ninth grades would, in Columbia, take the seventh grade out of the elementary schools, thus removing the older boys and girls from the young children. This will be an advantage to both, for with the limited playground that obtains in many schools either the older children are prohibited from playing the rough games which their natures crave and their muscles demand, or else through fear of bodily injury the little children are crowded to one side and fail to secure that opportunity for free exercise without restraint that they most need. Furthermore, through such segregation the attention of the principal and teachers can be better centered upon the needs of these young children without being diverted to the difficult problems of management, of instruction, and of control which the adolescent child of necessity raises. Too frequently in many schools of the traditional organization the difficulties and problems of the older children absorb the attention of the principal and his faculty, to the neglect of the younger children, and in consequence in many places serious weakness is to be found in the early period of school life.

#### ADVANTAGES OF THE JUNIOR HIGH-SCHOOL ORGANIZATION.

By bringing the seventh, eighth, and ninth grades together at a central point it will be possible for the school department to offer to the pupils in such grades a choice in the subjects of study. In the usual ward school it would obviously be impossible to offer any option, for as one proceeds upward in the grades of the system the attendance falls off rapidly. The seventh grade, therefore, is always very much smaller than preceding grades, and in many schools it is barely large enough to maintain two classes. From the standpoint of expense alone, therefore, it would not be practicable to offer to the seventh grade, scattered as it is among a number of schools, a variety of choice in subjects to be studied. Such opportunity can be provided only where a sufficient number of pupils are grouped together to make each class large enough to justify the assignment of a teacher. There can be little question that by the time young people have reached the upper grades of the grammar schools their tastes, aptitudes, and abilities are sufficiently developed to warrant giving them an opportunity for the exercise of some preference in the selection of subjects to be studied. An organization of the school system whereby such grades are brought together in numbers is the only arrangement, within reasonable limits of expense, through which this variety can be secured.



By bringing together in this way a number of pupils of the ages and attainments of those of the seventh and eighth grades, the principal and his faculty have an opportunity of initiating a splendid work through the student-body organization that can thereby be formed. Such an arrangement provides the opportunity for developing the social consciousness of the individual and through it teaching him how to conduct himself among his fellows, and at an age when the instinct for establishing social relationships runs high. Perhaps no lesson is of greater practical value to the individual than that of learning how to get on with his fellows without compromising his principles and standards. The activities coming naturally through participation in a live student-body organization provide unusual opportunities for teaching such lessons concretely, naturally, and therefore effectively. Furthermore, by means of a student-body organization high standards of conduct and character can be secured and a general school morale developed as in no other way. It has been found, too, that a measure of student government can be introduced in conjunction with such a plan, with advantage to those who participate in the work and with beneficial reaction upon the tone of the school. It has been observed that students in the junior high school who, by means of such activities, develop confidence in themselves very quickly make their influence felt in the student body of the senior high school when that school is reached. Thus, with such an internal organization of the students as this plan provides, a hitherto, unsuspected and undeveloped field exists wherein can be secured highly significant results of a very practical character.

#### MEN TEACHERS NEEDED IN THE SCHOOLS.

Again, a segmentation of the divisions of the public-school system, in accordance with such a plan, fully justifies the paying of high-school salaries to all teachers in the junior school group who have certificates of high-school grade. Where this is done, it becomes possible to command the services of young men who are college graduates and who are willing to enter these grades as teachers and to remain therein for a time. The customary arrangement, wherein the seventh or the seventh and eighth grades are grouped with the elementary division, and wherein the elementary school schedule only applies, offers no inducement to such men. In consequence, in most communities throughout the United States the sorry fact is that generations of boys and girls are passing through the entire elementary period of school life without at any time ever having come under the influence of a male teacher. It frequently happens, therefore, that a child is never under the instruction of a man until he reaches the high school, and as nearly three-fourths of the school population of the land never enter the high school, it is clear that

the criticism that our school system is tending toward a feminization of the children is a just one. In Columbia this danger has been partially met by requiring the principals to teach part or all time. This is an unsatisfactory arrangement, however, for it eliminates them from the work of supervision, to which they ought to be devoting much of their thought and attention.

#### THE SENIOR HIGH SCHOOL.

Then, through such a grouping as this plan proposes, it would seem that the work of the senior high school could be made more intensive than it usually is, with higher standards of scholarship and more rigid requirements than universally obtain, and this without working a hardship upon the young people who enter the school; for it would seem that if the work in the junior high school be carefully and efficiently done the incoming students will develop a much more serious attitude toward their work, and will have oriented themselves better and more quickly in their subjects.

Moreover, the pupils entering the senior high school will have developed in the junior high school a greater cohesion than obtains under the old form of organization. Under the customary plan, pupils dribble into the high school in small numbers and from many schools. They are lacking in anything approaching community feeling or a feeling of group responsibility. They have had no experience in organized action and are not conscious of their individual responsibility in personally contributing to the establishment of a student-body sentiment that shall be high and lofty in its purpose and influence.

In consequence, it is difficult for the student body of the school to assimilate such pupils properly and completely, and if the existing school morale be low, these incomers are in no way fitted to lift it. With two or three years of community life at the junior high-school center wherein the administrative methods are shaped to develop this responsibility, the pupils would necessarily enter the senior high school at a much higher level with respect to school standards than obtains under the present procedure.

#### THE JUNIOR HIGH-SCHOOL BUILDING.

While the ideal plan undoubtedly is to provide a separate plant for the pupils of the junior high school, and while the majority of cities employing this form of organization have provided for such separation, yet in places where the local situation prevents, various makeshifts have been resorted to. In some instances the junior and senior high schools are housed in the same building, in other instances the junior high school is assigned to rooms in a ward school

building, and in still other instances the junior high-school building, while kept separate from the building which houses the senior high school, stands on the same plat of ground. This latter plan, which is educationally the least objectionable of the alternatives, would be, for Columbia, doubtless, the least expensive, for there is sufficient space on the present high-school site for such a building. It would mean, however, decreasing in a material way the ground needed for the activities of the playground.

One immediate effect of providing a junior high school would be the setting free of rooms in each of the elementary schools and in the high school, sufficient in number, doubtless, to care for the normal growth of the department, in all of its divisions, for several years. All of the claims, it should be added, which can be made for the junior high school for white children would apply with equal force to the negroes.

#### CARE FOR THE GROWTH OF THE NEGRO SCHOOL POPULATION.

The situation as to the negro children of 6 to 14 years of age follows:

##### *Negro children 6 to 14 distributed by attendance districts—Local census.*

Schools.	Reported in school.	Reported not in school.	Total.
Waverley.....	363	40	403
Shandon.....	11	4	15
Taylor.....	118	33	151
Logan.....	323	42	365
McMaster.....	568	100	668
Blossom Street and Granby.....	460	48	508
	1,843	267	2,110

From 8 to 12 additional rooms, depending upon the accuracy of the census returns, would be needed to take care of the negro children not now in school but who would come under the operation of the attendance law if it were enforced. This problem is bound up with the larger problem of caring for the negro children as a whole, and can best be viewed in conjunction therewith.

At present there are but two school plants in Columbia for the negroes—the Howard School, a combined elementary and high school, with a principal and 23 teachers; and the Booker T. Washington School, for elementary grade pupils, with a principal and 12 teachers. In these two schools there was an enrollment in 1917 of 2,237 pupils which averages more than 60 children per teacher, a condition wherein it is impossible for teachers to do anything like satisfactory work.

The Booker T. Washington School has a modern building, recently completed, which is a credit to the city, but the Howard School building is a disgrace and should be replaced by a modern structure.

It would seem that a wise program for future consummation would comprise the following steps:

1. Replace the Howard building with a modern building or buildings, planned to house a group of pupils comprising the first six grades and a second group comprising the seventh, eighth, and ninth grades only.

2. Equip and occupy the rooms in the Booker T. Washington School which are now vacant.

3. Divert the Waverley School, now occupied by white children, to the use of the negro children of elementary grade and procure a site somewhat north and west of the Waverley School and closer in from the city boundary and erect thereon a building for white children.

Such an arrangement would relieve the congestion at the Howard and Booker T. Washington Schools; would divide the city in so far as its negro population is concerned into three approximately equal attendance districts; would remove the white children of the Waverley district to a point not immediately surrounded by negro families, as now obtains; and would relieve the present crowded condition of the Taylor and McMaster buildings. This plan, in conjunction with the reorganization plan discussed in connection with housing the white children, would provide facilities of modern character for all of the children of both races for a number of years to come it is believed.

#### AN ATTENDANCE OFFICER IS ESSENTIAL.

An essential step in the enforcement of the attendance law is that of employing a competent attendance officer, preferably one who has had experience in social service work and who commands the respect and confidence of the community. He should be employed on full time for a 12-months year, for there is much during the vacation months which he can profitably do in visiting the employers of school children, in following up the arrival and departure of resident families, in persuading individuals who think they must drop out of school to return, in helping worthy and needy students to find work, and in laying the basis for efficient work when the school term opens. It is customary in many places to make the attendance officer a deputy of the police force and thus invest him with the authority for making arrests, though this authority should be used sparingly and only as a last resort. He should be provided with a motorcycle, as he will need to cover quickly all parts of the city and perhaps the adjacent country.

For his use the essential information contained in the school-census sheets relating to children of compulsory age should be transferred to filing cards and be grouped by attendance districts. During the first week of each term he should check his census cards with the school enrollment and investigate every case of non-enrollment. To him should be referred for investigation all cases of prolonged and unexplained absence. He can render valuable service, too, to the department by investigating the home conditions of children who are progressing badly in their work or who may be suspected by the teachers of living in insanitary, impoverished, or immoral surroundings. To him, also, should be intrusted the supervision of the taking of the annual school census, for his familiarity with the city and his acquaintanceship with individual families resident therein will go far toward rendering the census increasingly complete. By establishing relationships with charity workers, with the judges who try cases of juvenile delinquency, with social-service organizations, with police officials, with the board of health, and with employers of labor, a competent, farsighted, and thoroughly unselfish attendance officer can develop for himself a field of usefulness to the school department and to the community at large second to none.

The board should pay a salary large enough to secure a man trained to such work and large enough also, it may be added, to induce the right man to remain in the work for a period of years, for obviously in work of this character favorable acquaintanceship in the community is an important asset, and acquaintanceship is a matter of time. All too frequently, however, the appointment goes to some broken-down politician or ex-policeman, or to a poor relative of a city official and the story abruptly closes.

#### THE VALUE OF A SCHOOL CENSUS.

A school census taken during the same month each year of all children of school age is indispensable to the enforcement of an attendance law; furthermore, through it valuable information can be secured which when analyzed will provide the school authorities with a dependable basis for conclusions regarding many problems relating to the administration of the system. A permanent record card should be made for every family in the city, which should contain besides other social data the name, address, sex, age, nativity; whether attending public, private, or parochial school; class in such school; the reason for not attending school; if employed, where, and how; and a brief statement of the school history of every child in the family. This family record card should be made in duplicate, one copy to be retained by the attendance officer and the other to be kept on file with the principal of the school attended by the children.

If these cards are kept up to date as they should be, the whereabouts of every child of school age can be known at all times and the essential facts about each can be secured upon a moment's notice.

Such a permanent record, always in the making, checked up each year by a census taken by a house-to-house canvass, is of inestimable value in enforcing laws having to do with compulsory attendance, with child labor, and with the granting of working permits. A tabulation of such records each year by blocks and by districts will give valuable information regarding the growth of the city, the direction this growth is taking, and the changing and shifting character of the population—information which is essential if the board is to plan wisely far enough in advance to provide the necessary accommodations by the time they are needed.

#### OVER-AGE CHILDREN IN COLUMBIA.

Until 1915, according to the rules of the board of school commissioners, two calendar years were required for entering children to complete the work outlined for the first grade. This arrangement provided that the children of this grade should attend school during these two years but one-half of the time. A child, therefore, who entered the system in his sixth year, if he made normal progress, entered the second grade in his eighth year and the high school (eighth grade) in his fourteenth year, completing his four-year high-school course in his seventeenth year. In 1915 this plan was abolished for the white schools but retained for the negro schools. Now, in the white schools, children attend full time from the first, but enrollment before 7 years of age is discouraged though not absolutely forbidden. A child, then, entering the system in his seventh year, a year later than under the former plan, is due to reach the high school (eighth grade) at the same age as before, namely at 14.

Educators in their discussions of over-age pupils, that is, those who are retarded for any reason in their progress through school, have generally agreed to allow a leeway of one year in the age of enrollment as a concession to variable factors which enter. That is to say, children who enter the first grade of the Columbia schools, under the plan which now prevails, during their seventh and eighth years would properly be considered of normal age. Seven years later these same children should enter the first high-school year (eighth grade) at the normal ages of 14 or 15. Any who are relatively older at any point through the grade steps than these children would be are classed as over-age or retarded pupils. The same would be true also of the negro schools of Columbia, for, while the entering age is theoretically lower, 6 years, yet the course provides for half-time attendance during the first two years. The following ages, therefore, should prop-

erly be held to be normal ages for the several grades of the Columbia schools as they are now organized:

ELEMENTARY DIVISION.

First grade.....	Seventh and eighth years.
Second grade.....	Eight and ninth years.
Third grade.....	Ninth and tenth years.
Fourth grade.....	Tenth and eleventh years.
Fifth grade.....	Eleventh and twelfth years.
Sixth grade.....	Twelfth and thirteenth years.
Seventh grade.....	Thirteenth and fourteenth years.

HIGH-SCHOOL DIVISION.

First year.....	Fourteenth and fifteenth years.
Second year.....	Fifteenth and sixteenth years.
Third year.....	Sixteenth and seventeenth years.
Fourth year.....	Seventeenth and eighteenth years.

Children under these ages are called "under-age" children, either because they have progressed through the grades more rapidly than children usually do or because they entered the system before they were 7 years of age. Children above these ages are called "over-age" or "retarded" children, due either to the fact that they have had to repeat work in the grades or because they were delayed in entering school beyond the eighth year.

The following tables show the age-grade distribution of the school children of Columbia, white and negro, for the first term of 1917 segregated in to "under-age," "normal age," and "over-age" groups. The numbers to the left of the first vertical lines represent the pupils in the several grades who are under age, those between the vertical lines indicate the number who are of normal age, and those to the right of the second vertical lines express the number of children who are over age or retarded in their work.

Age-grade distribution of white children.

Grades.	Total pupils.	Ages.																		Under-age.	Normal age.	Over-age.
		6	7	8	9	10	11	12	13	14	15	16	17	18	19							
I.....	577	55	254	168	55	24	15	3	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	55	422	100
2.....	517	.....	75	203	120	47	32	19	12	6	2	1	.....	.....	.....	.....	.....	.....	.....	75	323	119
3.....	495	.....	.....	36	185	146	73	31	18	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	36	331	129
4.....	460	.....	.....	1	35	128	144	101	31	11	9	.....	.....	.....	.....	.....	.....	.....	.....	36	272	152
5.....	345	.....	.....	.....	21	101	109	77	30	4	2	1	.....	.....	.....	.....	.....	.....	.....	21	210	114
6.....	276	.....	.....	.....	.....	9	78	105	62	17	5	.....	.....	.....	.....	.....	.....	.....	.....	9	183	84
7.....	222	.....	.....	.....	.....	4	23	72	69	38	13	2	1	.....	.....	.....	.....	.....	.....	27	141	54
I.....	246	.....	.....	.....	.....	.....	4	28	64	100	45	4	1	.....	.....	.....	.....	.....	.....	32	164	50
II.....	153	.....	.....	.....	.....	.....	.....	1	16	52	55	22	7	.....	.....	.....	.....	.....	.....	17	107	29
III.....	77	.....	.....	.....	.....	.....	.....	.....	3	10	24	27	11	2	.....	.....	.....	.....	.....	13	51	13
IV.....	39	.....	.....	.....	.....	.....	.....	.....	.....	1	2	17	15	4	.....	.....	.....	.....	.....	3	32	4
Total....	3,407	55	329	408	395	366	378	368	344	269	234	147	73	35	6	324	2,236	847				





Age-grade distribution of Columbia white and negro children compared—Continued.

Grades.	Under-age.				Normal age.				Over-age.			
	White.		Negro.		White.		Negro.		White.		Negro.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
High-school division:												
First grade.....	32	13.0	10	14.5	164	66.7	45	65.3	50	20.3	14	20.3
Second grade.....	17	11.1	0	.0	107	70.0	43	66.2	29	18.9	22	33.8
Third grade.....	13	16.9	2	5.7	51	66.2	17	48.6	13	16.9	16	45.7
Fourth grade.....	3	7.7			32	82.0			4	10.3		
Total.....	324	9.5	192	9.5	2,236	65.7	753	37.7	847	24.8	1,056	52.8

This table shows that for both white and negro children the "under-age" group comprises 9.5 per cent of the enrollment of the respective races. As we have already pointed out this is larger than the actual facts warrant. In comparison with other cities, however, it is low. As to the group of "over-age" children the proportion among the negroes runs much higher in each grade excepting in the first year of the high school, where each stands at 20.3 per cent. In general, it may be said that for every white child who is retarded in his progress through school there are two negro children who are over age for their grades. Crowded classes, greater irregularity of attendance, and the complete lack of the supervision of negro teachers are factors which account in part, at least, for this difference in the degree of the retardation of the two races.

By combining the facts of the preceding table relating to the white and negro children the situation for the Columbia system as a whole is seen. The following table shows the number of over-age children of the system, distributed by grades.

Over-age pupils in Columbia, distributed by grades.

Grades.	Enrollment.			Over-age pupils.			Per cent of enrollment.
	White.	Negro.	Total.	White.	Negro.	Total.	
Elementary division:							
First grade.....	577	676	1,253	100	275	375	30.0
Second grade.....	517	300	817	119	191	310	38.0
Third grade.....	495	288	783	128	173	301	38.4
Fourth grade.....	460	204	664	152	131	283	42.6
Fifth grade.....	345	171	516	114	120	234	45.3
Sixth grade.....	276	110	386	84	61	145	37.5
Seventh grade.....	222	83	315	54	53	107	34.0
High-school division:							
First year.....	246	69	315	50	14	64	20.3
Second year.....	153	65	218	29	22	51	13.3
Third year.....	77	35	112	13	16	29	25.9
Fourth year.....	39	0	39	4	0	4	10.3
Total.....	3,407	2,001	5,408	847	1,056	1,903	35.1

*Variations from the normal age among cities.<sup>1</sup>*

Cities.	Enrollment.	Per cent under age.	Per cent normal age.	Per cent over age.
Amsterdam, N. Y.....	2,371	49	23	28
Bayonne, N. J.....	7,033	27	31	42
Canton, Ohio.....	5,567	28	38	34
Danbury, Conn.....	1,967	38	31	31
Danville, Ill.....	2,260	28	34	38
East St. Louis, Ill.....	5,380	22	34	44
Elizabeth, N. J.....	7,058	23	31	46
Elmira, N. Y.....	2,487	38	28	34
Hazleton, Pa.....	2,655	22	36	42
Indianapolis, Ind.....	23,874	34	37	29
Kenosha, Wis.....	2,223	16	36	48
Milwaukee, Wis.....	32,251	28	41	31
Montclair, N. J.....	2,568	18	34	48
Muskegon, Mich.....	3,163	25	40	35
New Orleans, La. (white).....	23,664	20	31	49
Plainfield, N. J.....	2,312	30	30	40
Reading, Pa.....	10,585	25	35	40
Rockford, Ill.....	5,649	28	40	32
Topeka, Kans.....	4,894	26	38	36
Trenton, N. J.....	8,787	31	31	38
Des Moines (Report, 1915).....		13	42	45
Altoona (Report, 1915).....		13	37	50
Butte, Mont. (survey).....		7	42	51
Salt Lake City (survey).....				
Brookline, Mass. (survey).....	2,859	16	40	43
San Francisco, Cal. (survey).....		4	40	56
San Francisco, Cal. (survey).....		12	43	45
COLUMBIA, S. C.....	5,408	10	55	35

<sup>1</sup> Except for the last 7 cities in this list the statistics were taken from Ayres, *The Identification of the Misfit Child*. (1911.)

In respect to under-age children—that is, those who are progressing through the grades more rapidly than their fellows—Columbia ranks among the cities having the lowest percentage. Theoretically, if the course of study of a given system is shaped with the requirements of the majority in mind then there should be just about as many children passing through the grades faster than the normal rate as there are those who are over age. In a number of cities of the foregoing list the under-age and over-age columns are nearly balanced. As promotions become more flexible, and as a system concerns itself more and more with the needs of individual children, this theoretical balance will increasingly be approximated. In general, systems having few children who are accelerated in their work are rigid, inflexible, more or less mechanical, and tend to consider mass requirements rather than the requirements of individuals.

The belief that classes of pupils must be held together, intact for an entire term, and that shifts and reorganizations should be made at the end of a term only, is responsible undoubtedly for much of the rigidity of school systems. In point of fact, in schools where two or more classes are on the same level of advancement respecting the course of study, it is easy to group the best in each at frequent intervals during the term, permitting those who are capable to skip a month's assignment of work or more and in this way to accelerate their progress through the grades. The ungraded class plan, discussed elsewhere in this report, is another way of accomplishing the same end. Perhaps, however, the most effective means

of introducing this element of flexibility in the Columbia system would be that of substituting for promotions by examination the plan of promotion based on the normal distribution of ability. This plan is discussed in detail in Section V.

The second point to be noted in connection with the preceding table is the relative place Columbia occupies among other cities respecting the percentage of her pupils who are over age. Of her enrollment, 35.1 per cent are over age, against an average for the list of 40 per cent and a median of 40 per cent also. In this matter her record among these cities is well within the average. Comparisons here, however, are not to be taken as indicating more than general tendencies, for to be fair another factor needs to be known, and that is what percentage of over-age pupils in these cities have dropped out of school altogether. Obviously a city where a large percentage of repeaters withdraw will make a more favorable showing in a comparison as to over-age percentage than will a city which holds its over-age children in its system. We know how many children were repeating work in the Columbia schools during the last half of 1917, and we know, also, how many of these withdrew from schools, but we do not know what the withdrawals of repeaters in the other cities of the foregoing list have been.

#### THE REPEATERS IN THE COLUMBIA SYSTEM.

When for any reason a pupil fails to be promoted at the accustomed time he is usually obliged to repeat the work that he has been over during the year; or half-year, if promotions are made twice a year. Such a child is called a "repeater" and in some schools certain children have been held in a given grade so long that the same work has been gone over six times. In Columbia the largest number of repetitions of a single grade reported was five, and that for but one child, a negro in the first grade of the Booker T. Washington School. In the system as a whole, during the last term of 1917, there were 577 children who were taking their work the second time, 53 taking it the third time, 15 the fourth time, and 1 the fifth time. Altogether, then, during the closing term of 1917, there were 646 pupils, or 12 per cent of the enrollment, who were repeating their work one or more times.

#### THE WITHDRAWAL OF REPEATERS.

The curious fact appears that as a group the repeaters, even though they have failed in promotion, show a greater tenacity than others about remaining in school. The tables which follow show that 16.3 per cent of those repeating their work for the term dropped out of school, whereas the system as a whole during the same period lost

18.1 per cent of its enrollment. The tables which follow bring out these facts about the loss of pupils from the system, compared with the loss among the repeaters, together with some of the reasons given by the teachers which produced these repeaters.

*Loss of pupils from the system.*

Pupils.	Total enrollment.	Number belonging at end of term.	Loss.	Percentage of loss.
White children:				
Elementary.....	2,892	2,440	452	15.6
High.....	515	452	63	12.2
Total.....	3,407	2,892	515	15.1
Negro children:				
Elementary.....	1,532	1,485	347	18.8
High.....	169	151	18	10.6
Total.....	2,001	1,636	365	18.2
Grand total.....	5,408	4,548	981	18.1

*Loss among the repeaters.*

Pupils.	Taking work second time	Withdrawals.	Taking work third time.	Withdrawals.	Taking work fourth time.	Withdrawals.	Total repeaters.	Total withdrawals.	Percentage withdrawing.
White children:									
Elementary.....	277	48	31	9	9	5	317	62	19.5
High.....	33	5	4	1	0	0	37	6	16.2
Total.....	310	53	35	10	9	5	354	68	19.2
Negro children:									
Elementary.....	262	31	18	2	6	1	286	34	11.9
High.....	5	3	0	0	0	0	5	3	60.0
Total.....	267	34	18	2	6	1	291	37	12.7
Grand total.....	577	87	53	12	15	6	645	105	16.3

*Causes producing the repeaters, advanced by teachers.*

	Number of cases.
Sickness.....	80
Entering new school system.....	95
Indifference to school and study.....	216
Work too difficult.....	69
Mentally deficient.....	146
No reason given.....	39
<b>Total repeaters.....</b>	<b>645</b>

THE SCHOOL HISTORY OF 100 COLUMBIA PUPILS.

Preceding tables are based upon statistics of large groups of children as shown by school and census records. They indicate with approximate accuracy the general trend in the systems studied, but

within the limits set there are of necessity many opportunities for individual variations which the statistical method will not disclose. Much more accurate and valuable conclusions could be drawn were it possible to get at the school history of each child entering a system. Many departments, recognizing the need of more accurate information relative to the efficiency of the schools, are modifying their records so that the history of the progress of every child entering the system will be available at all times for such study.

The records of promotions and failures of every child who has entered the Columbia system have been kept in the teachers' registers, all of which, from the first, have been preserved. It was possible, therefore, to go back 11 years in the system, take 100 children who entered at that time and who should have graduated from the high school in 1917, and by tracing each through the registers to compile an accurate record of what happened to the group. This was done, and the tables which follow show the results of this study. It should be added that in making up the list of 100 names, 50 white boys and 50 white girls were taken in the order in which their names chanced to appear in the registers of the school year 1905-6. The list comprises, therefore, a typical group of white children.

*Survival of 100 white pupils entering the first grade together.*

	Elementary grades.							High-school grades.			
	I.	II.	III.	IV.	V.	VI.	VII.	I.	II.	III.	IV.
Entered.....	100	78	71	59	54	47	41	29	23	14	10
Left.....	22	7	12	5	7	6	12	6	9	4	3
Percentage left of entered.....	22.0	8.9	16.9	8.5	13.0	12.7	29.2	20.7	39.1	28.5	30.0

*Notes on the above table.*

Two who left the fourth grade are known to have graduated in regular time at another school.

One entered Clemson College from the ninth grade.

Seven graduated; two are repeating their work; one entered the University of South Carolina from the eleventh grade.

*Scholarship distribution of those leaving the system.*

Pupils.	Scholarship satisfactory, so may have entered other systems.	Scholarship satisfactory, but did not enter other system.	Graduated from other systems.	Failed in school work.	Still in local school system.	Entered college before graduation.	Graduated from local school.	Total.
Later history not known.....	24			18				42
Later history known.....		7	2	38	2	2	7	58

OBSERVATIONS BASED ON THE PRECEDING TABLES.

1. *Regarding survival:*

- 47 entered the sixth grade.
- 29 entered the first high-school year (eighth year).
- 14 entered the third high-school year (tenth year).
- 7 graduated from the local high school.
- 2 are known to have graduated from other high schools.
- 2 are still in the system.
- 2 entered college before completing high school.

2. *Regarding the 7 local graduates (3 boys, 4 girls):*

- 5 completed the course in normal time.
- 2 gained one year each.
- 2 went into business.
- 1 entered Clemson College.
- 1 entered the University of South Carolina.
- 1 joined the Navy.
- 2 remained at home.

3. *Regarding the 53 who left before entering the sixth grade:*

- 22 left before reaching the second grade.
- 31 entered the second grade.
- 7 of the 31 who entered the second grade, but who left before reaching the sixth, were promoted regularly as long as they remained in school.
- 2 were accelerated in their promotions.
- 22 had records of repetition and failure in work.

4. *Regarding the 22 who left before reaching the second grade:*

- 6 were under 6 years of age upon entering school.
- 8 were 6 but less than 7 years of age.
- 4 were 7 but less than 8 years of age.
- 2 were 8 but less than 9 years of age.
- 1 was above 9 years.
- 1 had no age given.

5. *Regarding the 18 who entered the sixth grade, but left before entering the high school (eighth grade):*

- 3 were promoted regularly as long as they remained.
- 2 were accelerated in promotion.
- 13 had records of repetition and failure in work.

6. *Regarding the 19 entering high school, but leaving before completing the third year:*

- 3 were regularly promoted during their course.
- 1 entered Clemson College from the ninth grade.
- 15 had records of repetition and failure.

*Entering age in relation to retardation in the first grade.*

Pupils.	Below 5 years 6 months.		5 years 6 months but less than 6 years.		6 years but less than 7 years.		7 years but less than 8 years.		8 years but less than 9 years.		9 years but less than 10 years.		No rating.	Total.
	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.	Promoted.	Failed.		
Number.....	0	5	10	9	35	10	17	4	3	0	2	0	5	100
Percentage....	0.0	100.0	52.7	47.3	71.5	28.5	76.5	23.5	100.0	0.0	100.0	0.0	.....	.....

*Notes on the above table.*

In the first grade 67 were promoted; 28 failed; 5 had no rating.

All below 5½ years failed; all above 8 years passed.

The percentage of failures of those below the sixth year of age was 58.3 per cent; of those between 6 and 7 years, 28.5 per cent; and between 7 and 8 years, 23.5 per cent.

The percentage of failures increases as entering ages decrease from 6 years and decreases as entering ages increase above 6 years.

## THE EXPECTANCY SURVIVAL COMPARED WITH ACTUAL SURVIVAL.

Several notable studies of school mortality and survival have been made during the past 10 years, all based upon mass statistics, which, as already pointed out, can go no further than to suggest a general tendency. While the foremost of the investigators of this matter disagree in minor details, yet noting as an exception Thorndike's belief that school elimination begins early in the primary grades, they agree, in the main, that of every 100 children annually entering the first grade of city schools nearly all will remain to the end of the fifth grade; that about 50 out of every entering 100 will reach the last grade of the elementary school; that 30 to 40 will enter the high school; that 8 to 10 will graduate from the high school; that of this number from 1 to 3 will enter normal schools, colleges, and schools beyond the grade of high school; and that about one-half of these will remain to the completion of their course.

It will be of interest to compare this expectancy as to survival with the actual facts as shown by the record made by 100 of Columbia's pupils. This comparison follows:

*Expectancy survival of 100 entering pupils compared with actual survival.*

	Elementary grades.								High-school grades.			
	1	2	3	4	5	6	7	8	I	II	III	IV
Thorndike <sup>1</sup> .....	100	100	100	90	81	68	54	40	27	17	12	8
Ayres <sup>2</sup> .....	173	129	128	120	106	90	71	51	40	19	14	10
Strayer: <sup>3</sup>												
Boys.....	150	120	115	110	100	85	65	50	35	20	14	10
Girls.....	140	115	110	110	95	85	75	60	45	30	20	16
Columbia, S. C.....	100	78	71	59	54	47	41	.....	29	23	14	4 <sup>4</sup>

<sup>1</sup> Thorndike: *The Elimination of Pupils from School*, p. 111.

<sup>2</sup> Ayres: *Laggards in Our Schools*, p. 57.

<sup>3</sup> Strayer: *Age and Grade Course of Schools and Colleges*, p. 135.

<sup>4</sup> Graduated.

Thorndike's contention that the break in school attendance begins in the primary grades is supported by this study of Columbia. However, it should be pointed out that in the systems studied by Ayres and Strayer compulsory attendance was probably enforced, while in Columbia no attempt has been made to enforce the law in this particular. In Columbia the break began in the first year and

was heavy throughout all the grades of the elementary school, the three points of especial danger being the first grade, the last grade of the elementary school, and the second year of the high school, the loss at each point being, respectively, 22 per cent, 29.2 per cent, and 39.1 per cent of those entering the grade (see chart page 175). In general it may be said that the history of this group in Columbia follows Thorndike's theoretical distribution more closely than either that of Ayres or Strayer. However, before any hard and fast conclusion can be drawn as to the actual facts regarding mortality and survival among our city school systems, many more studies of the school histories of typical groups of children in various parts of this country must be made.

The facts, then, concerning Columbia's holding power justify the conclusion that—despite the handicaps of inadequate maintenance, meager equipment, lack of adequate supervision, the failure to enforce the attendance law, relatively inflexible methods of promotion, and much teaching of a content which is uninteresting and unrelated to anything significant in the child's world—the system, though falling short of realizable possibilities, yet compares favorably with the tendency among the city systems of the country.

#### SUMMARY.

1. The school census gives a total of 7,938 children, 4,898 whites and 3,040 negroes, in Columbia between the ages of 6 and 21 years. There are reasons for thinking that this total may be about one-third short of the actual number.

2. According to the census there are 233 white children and 186 negroes of compulsory age, 8-14, not in school. To enforce compulsory attendance for all children from 6 to 14 years of age, additional provision would have to be made for about 450 children of each race.

3. To care for the growth of the white school population it is recommended that the system be reorganized on the basis of six grades in the elementary division; three grades in the junior high-school division; and three grades in the senior high-school division. By erecting a building for the junior high school and congregating thereat the seventh, eighth, and ninth grades of the system, sufficient room will be obtained, it is believed, to care for the growth of school attendance for a number of years.

4. To house the negro children the Howard School buildings should be replaced with modern buildings planned to accommodate two groups of pupils; one, comprising the first six grades, and a second, comprising the seventh, eighth, and ninth grades only. The vacant rooms of the Booker T. Washington School should be equipped; and the committee suggests that the Waverley School should be turned over to negro occupancy after a building for the



white children of the neighborhood has been provided, somewhat closer in from the city limits and farther to the north.

5. A progressive family census record should be kept which should be checked up each year by a school census taken under the supervision of an attendance officer, who is essential to the enforcement of the compulsory attendance law.

6. Of the school enrollment, 9.5 per cent are under age for the given grades; 55.3 per cent are of normal age; and 35.1 per cent are over-age. Except in the percentage of under-age children, which is low, Columbia ranks well within the average of the cities in these proportions.

7. Twelve per cent of the enrollment repeat their work one or more times. This is too large a proportion.

8. The history of 100 pupils who entered the first grade together 11 years ago shows the following survival: 78 of them entered the second grade; 71 entered the third grade; 59 entered the fourth grade; 54 entered the fifth; 47 entered the sixth; 41 entered the seventh; 29 entered the first year of the high school (the eighth grade); 23 entered the second year; 14 entered the third year; 10 entered the fourth year, of which number 7 graduated from the local school.

9. The facts concerning the holding power of the Columbia system warrant the conclusion that the system, though falling short of possibilities, compares favorably with other cities of this country.

## VII.—SUMMARY OF GENERAL RECOMMENDATIONS.

(The following comprise only the more general recommendations which the survey committee submits; a summary of the detailed recommendations will be found at the end of each chapter or, in some instances, at the end of important divisions of chapters. It is not possible, of course, neither is it desirable, to introduce all of the recommendations made in this report at once. Rather, in making its report, the committee has attempted to set forth a constructive program, the inauguration of which should properly extend over a period of years.)

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1. *Length of the school course.*—Accepted school practice in the United States has fixed upon 12 years, beginning with the age of 6 as the proper length of the combined elementary and high-school periods. For a time in the New England States the prevailing course was one of 13 years, beginning with the age of 5; while in the Southern States the tendency has been to fix the length at 11 years and the beginning age at 6 or 7. In general, however, it is now agreed that the plan of 12 years, with a child entering at 6, best meets the educational needs of all.

As this time allotment now prevails in a large majority of cities and States, except in the South, and as it is being adopted in the cities of this section also; as the graduates of the Columbia schools should be as well equipped as are the graduates of the best schools of the United States; and as this is impossible when Columbia's course is shorter than that of most other cities, the committee recommends that the work of the elementary and high-school divisions be lengthened to an aggregate of 12 years, and that the age of 6 be fixed as the entering age.

2. *Regrouping of the grades.*—The practice which has prevailed among cities of dividing the 12 years or grades into an elementary division of 8 years and a high-school division of 4 years is changing to what is known as the six-three-three arrangement; that is, to an organization in which the elementary period is limited to 6 years and the high-school period is extended to 6 years but broken into two 3-year periods. One of these, usually comprising the seventh, eighth, and ninth grades, is generally called the junior high-school period; the other, the senior high-school period. This plan has been tested out so thoroughly among so many cities during the past eight years, and has met with such universal favor, that it seems fairly certain to become the typical grouping arrangement of this country. The committee recommends that this form of organization be adopted in Co-

lumbia and that the necessary adjustments be effected. These are discussed in detail on pages 161-165 of this report.

3. *The daily session.*—Ever since the school system of Columbia was established, the practice which prevails in the South has been followed, namely, beginning the single daily session at 9 a. m. and closing at 2 p. m., with two recess intermissions of 15 minutes each. The committee believes that the arrangement in effect generally, except in the South, of having a forenoon session and an afternoon session, the one beginning at 9 and closing at 11.30 or 12, and the other beginning at 1 or 1.30 and extending to 4 or 4.30 in the afternoon, is preferable.

Under the present plan when dismissal time comes teachers and children are hungry, and in consequence there is a tendency for all to make a rush for their homes. Hence no opportunity is afforded for the giving of that personal and individual help which many of the children need. Again, children can not do good work when hungry, so there must be a time toward the close of the session, under the arrangement which now obtains, when on this account there is a loss in the efficiency of the pupils' work. Furthermore, as many parents are laboring people and can not arrange for a meal at 2.30, as professional and business men can, many of the children get nothing to eat when they reach home except what is left over from the noon meal. With many this means that the only hot food they get is that which is served at breakfast, for the custom prevails in the South of making the mid-meal the hot meal of the day, the supper usually being light and often cold.

While it is pleasant for teachers to be dismissed for the day early in the afternoon, and while a double session plan will affect the opportunities which some of the children have for after-school work, nevertheless the committee feels that the educational benefits of the two-session plan outweigh the disadvantages and recommends that it be adopted.

4. *An all-year school session.*—In various sections of the country cities are adopting the plan of breaking the year up into four quarters of 12 weeks each, and holding a school session for the aggregate of 48 weeks per annum.

The plan, meeting as it does the needs of a greater number of children, introduces thereby desirable elements of flexibility in the school system. It eliminates the wastage due to the shut-down of expensive school plants for the vacation period; and it provides opportunity for usefully employing the time of pupils who otherwise would be idle or else occupied in running the streets. Furthermore, it is now coming to be recognized that continuous school attendance works no hardship upon healthy children so long as worry and unnecessary mental strain are avoided.

Then, too, the all-year session harmonizes naturally with the plan, discussed elsewhere, of offering an opportunity to pupils of high-school age to alternate between school and outside work. It also enables those who desire to do so to pass through the schools more rapidly than formerly, thus making it possible for them to become self-supporting at an earlier age than heretofore.

The committee indorses the plan and would suggest that steps be taken at an early date to make the modifications in the present form of organization which its adoption would entail. The transition would not be difficult, requiring only the expansion of the summer school which is now held.

The plan is discussed more fully on pages 61, 62 of this report.

5. *Cooperative schools.*—The suggestion which the committee makes here is merely this, that arrangements be entered into between the school and the employers of labor in particular local industries whereby both boys and girls of high-school age may be permitted to alternate between school and outside employment in periods of one or two weeks. This plan is set forth in some detail on pages 79, 80 of this report. This arrangement gives the school the use of industrial equipments which it is impossible for the school to duplicate; it gives the young people the opportunity of securing industrial or business training under actual conditions; it enables them thereby more intelligently to determine their own aptitudes; and it helps them to become partly self-supporting, at least, while they are yet in school. No separate schools are needed, for the modification of schedule and of organization for pupils who would wish to take advantage of such an opportunity would not be difficult. A study should be made of local needs and opportunities with a view to introducing such a plan for the training of both white and negro children of high-school age.

6. *Pupil promotion.*—While Columbia's present plan of promotion, which is based in part upon formal examinations and in part upon term standings, is the plan which is in operation very generally throughout the country, nevertheless, as it is administered, it works an injustice upon children, for it requires each pupil to square his work by a vague, intangible, theoretical standard of excellence set up by each teacher and which unwittingly fluctuates with her every emotional change.

Every group of children not artificially selected has a distribution of ability which is about the same as that of every other group. This distribution of ability should be the norm which should guide teachers in making their promotions. Such a plan eliminates the variations of standard due to differences among teachers and enables the class itself through its own progress to determine its own standards of accomplishment and of promotion. Such a plan would tend im-

mediately to break up the habit of failing, which the committee fears the school children of Columbia are forming, substituting therefor the habit of succeeding.

The plan is discussed in detail in Section V; the reasons are given, also, which impel the committee to urge its adoption.

7. *Supervision.*—The committee finds that the supervision of the schools, on the purely educational and professional side of the work, is entirely inadequate. The superintendent is both the secretary and the treasurer of the board. Besides the duties incident to this relationship, he has had to assume the responsibility for carrying into effect a 12-year building program. Along these lines of his activity his work has been admirably done, but he has found it impossible at the same time to supply personally that coordinating and stimulating influence which good educational teamwork demands. The supervisor of the elementary grades has overworked herself in the effort to do what she recognizes needs to be done. Part of her time has been diverted to distributing supplies, but even though her entire time were spent in the schools it would still be insufficient to satisfy the need. Moreover, the principals of even the larger schools have never been permitted to assume any authority in their schools in directing or supervising the teaching activities. In consequence, then, of these conditions, the teachers are not getting the constructive help in their work which they need.

Efficient help should at once be secured to free the superintendent from routine duties and permit him to give his mind over to constructive educational thinking and planning. If the junior high school form of organization be adopted, the superintendent, together with an elementary supervisor, restricted in her responsibility to the first six grades, and both working with and through competent principals who have sufficient time free from teaching to enable them to keep in close touch with the classroom work of their teachers, would provide an adequate corps of supervision running throughout the system. Such an arrangement, supplemented by supervisors of certain special subjects, such as music, penmanship, drawing, industrial arts, and home economics, and in the high schools by department heads working under the immediate authority of the principal, should provide a satisfactory supervisory organization at comparatively small additional cost to the department.

The committee feels that the supervision of the negro schools on the side of the instructional activities has been particularly lacking. The plan which is employed in important cities of the South of having their white supervisors, both men and women, direct the work of these schools, just as they do the work of the white schools, should be adopted in Columbia. For surely, if the city is going to provide school buildings and school equipment for the negroes and employ

teachers and maintain schools for them, it ought to follow up the work of these teachers and see that it is properly done.

The need of more supervision in the Columbia schools is discussed in Section V, and some of the results of inadequate supervision are pointed out.

8. *A schedule of salaries.*—Under the present salary schedule of the Columbia school corps, after paying for their board, room, laundry, and car fare for the nine months of the school term, the women teachers of the department have a margin of from \$185 to \$427.50 only, out of which they must provide their clothing and incidentals for the entire year and also their expenses for the three vacation months. Of the 165 cities listed by the United States Commissioner of Education as being in Columbia's population class (25,000 to 50,000), Columbia stood No. 8 from the bottom in the amount expended in 1915-16 in salaries of principals, supervisors, and teachers per pupil in average daily attendance. Of these 165 cities, 138 expended one and one-half times as much as Columbia, while 36 of them expended twice as much or more. Since that date the cost of living has risen enormously. Under conditions which now obtain it is impossible to attract to the schools, or to hold after they have once entered the system, teachers of the type that are needed.

The committee recommends an immediate and generous revision of the salary and wage schedules of all the employees of the school department. It suggests (see p. 45) a schedule for the elementary teachers which recognizes both length of service and relative merit. A detailed discussion of this matter will be found in Section III.

9. *The kindergarten.*—The kindergarten has won its way to a permanent place in the school organization of this country. There is evidence tending to show that kindergarten training lessens the failures of children in their later school work. This tendency is especially marked in the first grade. It exercises this influence both directly and indirectly; directly, in the sense that such training tends to fit a child for "finding himself" quickly in his school work; and, indirectly, by keeping children out of the first grade until they are more mature.

In Columbia one free kindergarten, supported by benevolences, has been established in the Blossom Street School. The committee recommends that this class be taken over by the school department and made an integral part of its system and that other classes be established in some other schools of the city. For a discussion of this topic, see pages 53-58 of this report.

10. *Evening classes.*—Evening schools for both children who can not attend the day school and for adults who wish to make up for lost opportunities have come to be a recognized part of the school machinery of all progressive communities. Columbia has made a

start in providing such opportunity, but should make definite plans for extending this most important department of school work.

11. *The negro schools.*—The Howard School is not a fit place for housing school children and should be replaced by a building of modern type. The committee suggests that a study of local conditions might show that the present site could be sold advantageously and a site purchased elsewhere which would be more suitable for school purposes.

The committee suggests, also, the desirability of permitting negro children to occupy the Waverley building after a building for the white children of the neighborhood has been erected to the north and somewhat farther in from the city limits.

With these changes it is believed that the negro school population can be taken care of for a number of years to come. These suggestions are discussed in some detail on pages 165, 166 of this report.

12. *Home economics.*—Work in home economics should be required of all girls from the fifth to the ninth grade, inclusive, and elective courses should be provided for those in the more advanced grades who desire the work. Afternoon and evening extension courses should also be provided for home makers and for young women now in stores and offices. At present central schools only should be equipped for the work, although it is desirable ultimately that the work should be done in all schools. A practice house should be established in the Blossom Street neighborhood. All schools having equipment should utilize the cooking work in a practical way by making the product the basis of noon lunches. One supervisor for the city should be provided, and she should be given an adequate force of assistants. For a detailed discussion, see pages 75-79.

13. *Manual training.*—Work in this department for the boys should parallel that in the home economics for the girls. When the girls of a given class are attending their sewing and cooking courses, the boys of the same class should be in the shops.

Beginning with the junior high-school period, opportunity should be provided for gaining instruction in woodworking and in machine-shop work which would prepare the pupils for entering the industries later in a wage-earning capacity, if desired. Special technical courses leading to the vocations should also be provided where there are groups sufficiently large to justify the expense.

The cooperative plan of alternating work in the school is commendable, and will give those who participate the chance of learning a vocation while yet in school.

14. *Instruction in agriculture.*—Agricultural courses should be organized in the high schools, and each pupil taking these should be required to illustrate the work of the term or year by completing at home under the supervision of the instructor an agricultural project.

The high-school instructor in agriculture should be required to train and direct grade teachers in showing the children of their classes how to grow gardens at their homes. See the discussion on pages 63-74 of this report.

15. *Playground and recreational activities.*—As now organized these activities are administered by a municipal department acting through a supervisor of playgrounds. During vacations and after school the grounds of some of the schools are used for supervised play. No arrangements, however, have been effected whereby the use of the basement facilities of the schools is permitted. The committee recommends that the work be turned over to the board of school commissioners to administer, for the recreational department could be made more effective as an integral part of the school system. Under such an arrangement the supervisor would have charge of organized games at recesses, would train the teachers to conduct physical exercises in their classrooms, and would organize and supervise the play activities of the children and adults during after-school hours. By such plan waste would be eliminated and greater efficiency be secured. See pages 73, 74 of this report.

16. *School-supervised home gardening.*—Gardening done by children at home in yards and vacant lots under constant and intelligent direction has great educational and economic value and should be made an essential part of the work of the schools. For this purpose there should be employed by school officials a sufficient number of teachers to allow one teacher-director of garden work for every 150 children between the ages of 8 and 15. These teachers should be employed for the entire year and should give their afternoons and Saturdays during the regular school term and all vacations to instructing and directing the children in gardening work.

17. *The compulsory attendance law.*—The compulsory attendance law now on the statute books should be enforced for both white and negro children alike. To accomplish this effectually an attendance officer is required who should keep a cumulative family record card and check this up each year by taking a school census. To him should be referred all cases of prolonged or unexplained absence on the part of children. He should be called upon to investigate the home conditions of children who are progressing badly in their work. A salary should be paid sufficient to secure a man trained to do this work, and sufficient, it may be added, to induce the right man to remain for a period of years in the work. For the discussion of this recommendation see pages 166, 167 of this report.

18. *Special classes for exceptional children.*—There are now enrolled in the Columbia system approximately 200 children who are exceptional in the sense that their needs require that they be placed in



special classes for individual instruction by teachers specially trained for this kind of work. To meet the need among the white children three special classes should be organized; one for the feeble-minded, one for the partially blind, and one for the partially deaf. Transportation for those living at a distance and who can not afford the necessary car fare should be provided by the board. The same facilities should be extended to the negro children as soon as the housing needs for the negro children who are normal have been met.

A "restoration" or "ungraded" class should be established in each of the large schools for those children who are irregular in their work and who are in need of more individual instruction than the regular teacher of the class can give. See the discussion on pages 58-62.

19. *Semiannual promotions in the negro schools.*—The semiannual promotion plan which has operated in the white schools since 1913-14 should be extended to the negro schools as well. Under the plan which now prevails in the negro schools, a child who fails in his work is obliged to repeat the work of the entire year; whereas, with the white children, under the semiannual promotion plan, a failure requires the repetition of but one term of school work.

20. *Content of school courses.*—Every effort should be made by teachers to enrich the content of their instruction. This means that textbooks must be supplemented by material gained from other sources. A good working library of well-selected books and periodicals is indispensable to good teaching. The people of the city should be urged to provide such a library at public expense. In addition, school libraries should be built up in each school comprising material which will supplement the work of the school. In the high school a room should be equipped as a library and the pupils encouraged to make constant use of it in the preparation of the class work. Teachers familiar with modern library methods should be placed in charge in rotation. For the discussion of this recommendation, see pages 119-125.

21. *Junior high school.*—If the committee's recommendation that the seven-four grouping of grades, which now obtains in Columbia, be changed to the six-three-three arrangement, then a junior high-school building will be needed at some central point where the seventh, eighth, and ninth grades of the entire city can be congregated. A site separate from the senior high school would be ideal and much to be desired. On grounds, however, of economy such a building could be erected on the present high-school site.

Through the erection of a junior high-school building and the withdrawal of the seventh grades from the elementary schools and of the eighth and ninth grades from the high school, it is believed that suffi-

cient room would be secured to care for the normal growth of the city for a number of years.

The committee also recommends that in the rebuilding of the Howard School for the negroes, suggested elsewhere, provision be made for a junior high-school department.

For details concerning these recommendations see the report, pages 161-166.

22. *School publicity.*—The committee thinks it probable that Columbia is not fully awake to the work of its schools or to their needs. It is the business of the school officials to keep the people fully informed as to both matters. No opportunity should ever be neglected for directing the active and interested attention of the community to the schools in order that adequate maintenance shall be assured. Instead of trying to reduce expenditures at every turn, thus crippling the work, the board of school commissioners should be aggressively endeavoring to raise sufficient funds to carry on public education in the manner demanded by present-day ideals and conditions. This matter is discussed more fully on pages 27-29 of this report.

From time to time, in his annual report to the board, the superintendent has made wise recommendations for the improvement of the schools. In many instances these have not been adopted, presumably for lack of funds. The committee suggests that the board could easily have made these obviously urgent recommendations the basis of a campaign of publicity in the community which in the end would have brought the necessary maintenance increase.

It is generally admitted among students of educational administration that boards of education, responsible as they are for the character of the work of their schools, should have the power to levy taxes for their support, to the end that there may be sufficient funds to carry out their policies effectively. In many places this is now the actual practice.

23. *Regarding Columbia's ability to inaugurate this program.*—Of the 213 cities of the United States listed by the Census Bureau as having a population of 30,000 or more, Columbia stands third from the bottom in the proportionate part of the annual city expenditure which goes to the support of her schools. She stands fifth from the bottom in the actual amount per capita of population which is diverted to the schools. Her school expenditure, proportionate to the expenditures for other municipal departments, would have to be increased one-half to bring her up to the average of the cities of 30,000 population or more. If Columbia doubled her school maintenance, and then added to this \$3 per pupil in average daily attendance, she would just reach the average expended per pupil in average daily attendance by the 1,233 cities of the United States having a population of 5,000 or more. She would have to increase her school ex-

penditure by 42 per cent to reach the average expended per pupil in average daily attendance by the cities of the South Atlantic States having a population of 5,000 or more.

Of the 179 cities listed by the United States Commissioner of Education as having a population ranging from 25,000 to 100,000, only two expended a smaller aggregate in 1915-16 for schools than did Columbia. One of these two cities, however, had less than one-half the number of school children which were enrolled in the Columbia schools and the other had less than two-thirds as many. For the same year the average aggregate amount expended by the 372 cities of this country having a population between 10,000 and 25,000 (a class of cities below that to which Columbia belongs) exceeded the total amount expended by Columbia for her schools by \$15,457.

The true tax rate of Columbia for all purposes comes within three numbers of being the lowest of all the cities of the United States having a population of 30,000 or over. Yet in actual assessable values, per capita of population, Columbia exceeds all but 11 of the 213 cities having a population of 30,000 or above.

Inasmuch, then, as Columbia is one of the 12 richest cities in the United States in property values, per capita of population, the committee has no hesitation in saying that Columbia can well afford to carry into effect the recommendations made in this report.



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