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A SCHOOL BUILDING PROGRAM FOR WASHINGTON, NORTH CAROLINA

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INTRODUCTION.

In December, 1921, the Board of Education of Washington, N. C., requested the United States Commissioner of Education to make a survey of the school buildings of Washington, N. C., with a view to working out a building program for the schools of that city. Miss Alice Barrows was detailed by the commissioner to make the survey, which she completed on December 8, 1921.

A SCHOOL BUILDING PROGRAM FOR WASHINGTON, N. C.

CONTENTS.—Washington has twice as many children as school seats—What congestion means—Conditions in the negro schools—No modern facilities—Standards for school buildings changed in past 10 years—Children deprived of play—Advantages of the work-study-play plan—Recommendations for a building program.

The seriousness of Washington's school-building problem consists in the fact that any building program projected now must not only take care of present congestion and provide for growth in the future, but it must also make up for the failure to provide adequate school facilities during the past 10 years. Washington would not now be in its present deplorable situation in regard to school-building facilities if it had kept up with the growth in school population, but it has not done so, and therefore the city must now not only provide for the future but pay the penalty of failing to meet its obligations to the children in the past.

WASHINGTON HAS TWICE AS MANY CHILDREN AS SCHOOL SEATS.

The present enrollment in Washington schools is 1,691. Ten years ago it was 1,154. In other words, from 1910–11 to 1920–21 there has been an increase of 46.5 per cent in school population, but even in 1910–11 there were 100 more children in the white schools and 200 more children in the negro schools than there were school seats. At present there are 22 classrooms available in the white and colored schools, and there are 45 classes of children. In other words, there are twice as many classes as there are classrooms available.

WHAT CONGESTION MEANS.

Such congestion as exists in the Washington schools is a menace to the health and strength and mental and moral development of the children. Although, as has just been pointed out, there are twice as many classes as there are classrooms, yet 1,691 children are going to school, and somehow space is found for them. As a result, the following conditions exist: In the white schools there are 8 rooms with more than 40 children. Little first-grade children are housed in basement rooms where the air and light are very bad. Five classes of primary-school children are going to school in old wooden-frame dwelling houses which are not fit to use for school purposes.

The children are packed so closely into the little sitting rooms of these unsuitable structures that one row of seats is within 3 inches of the wall, while another row of children have their desks directly beside the windows, so that the sun shines on the white paper on which they do their writing, making an intolerable glare for their eyes. As is to be expected, the air in these rooms is hot and close. It would be far better if these children were not in school at all, for under the present circumstances there is no question but that the eyesight of many children is being permanently injured, and their whole vitality lowered by the bad air and cramped positions in which they have to sit for three hours a day. It is asking too much of any teacher to teach under such conditions, for teaching becomes nothing but a heroic struggle with the impossible. Washington is not providing an *education* for these children in providing these old, dilapidated, insanitary buildings for them.

CONDITIONS IN THE NEGRO SCHOOLS.

If the conditions in the white schools are bad, the housing conditions in the negro schools are infinitely worse. The present negro school can not rightly be called a school building at all. It is a frame structure of six rooms into which children are herded as follows: Sixty-four children in one room with 55 seats;[1] 47 children in another room with only 36 seats; 49 children in a room with only 32 seats; 52 children and only 45 seats; 64 children and 58 seats; 63 children and 48 seats; and 76 children in a room with 63 seats. Because there is not enough room in the original building, rooms have been rented for school purposes in three different halls of a most undesirable type. There is a domestic-science room, but no running water in the building. There is a manual-training shop of a totally inadequate size and inadequate equipment.

There seems to be no question on the part of thoughtful members of the community that such a school building is a reflection upon the city of Washington.

NO MODERN FACILITIES IN THE PUBLIC SCHOOLS IN WASHINGTON.

But not only are the Washington schools badly congested, and not only do the children have to attend school in buildings which are a menace to their health, but also Washington schools are almost entirely lacking in modern school facilities. There is an auditorium in the white school (with very bad acoustic properties), but there is no gymnasium in either of the schools. There is no shop except the one just mentioned in the negro school. There is a lunch room but no domestic-science room in the white school, and a very poorly

[1] No class should have more than 40 children.

equipped cooking room in the negro school. Science is given as one of the courses in the high school, but, as a matter of fact, there is no laboratory worthy of the name. There is no physics laboratory, nor mechanical drawing room, nor free-hand drawing room, nor nature-study room, nor music room—in fact, none of the modern equipment considered absolutely essential in schools at the present time.

Such a condition is an injustice both to the pupils and to the teachers. Washington is fortunate in having a teaching force with a fine, progressive spirit, and a real professional interest in their work, but all the material conditions of the school tend to discourage the development of such a spirit. It is impossible to make bricks without straw, and it is equally impossible to teach shopwork except in shops, or science except in science laboratories, or drawing except in drawing studios, or cooking except in rooms with adequate equipment, or academic work in overcrowded, badly ventilated rooms. The teaching force of Washington deserves adequate buildings and equipment with which to do their work.

STANDARDS FOR SCHOOL BUILDINGS HAVE CHANGED GREATLY IN THE PAST TEN YEARS.

Before Washington can carry through a bond issue for school buildings which will meet its needs, one thing is absolutely essential, and that is that the people of Washington understand that the ideals in regard to what should be contained in an elementary school building, and how such a school building should be constructed have undergone a very great change in the past 15 years.

It is generally recognized now that a school building which contains nothing but classrooms can not meet the educational needs of the children of the present day. The reason for this is that social and industrial conditions outside the school have changed radically in the past decade, and schools have had to change to meet the different conditions. There has been a tendency for such a long time to think that "school" and "education" are synonymous that we have failed to realize that this is not necessarily the case.

For example, Washington, at present, is supplying only classrooms for the majority of its children in its schools, and yet as a matter of fact no child was ever educated by classroom study alone. All children have always been educated by three things—work and study and play. If they are deprived of any one of these, their education is incomplete. We all know when we stop to think of it that a child's education goes on each day from the moment that he gets up in the morning until he goes to bed at night. Some of this education he gets in school and some of it he gets outside of school, but—and

this is the important point—the kind of education which the child of to-day gets *outside* of school is very different from what he received 50 years ago outside of school, while the education which he received *in* school has remained much the same.

Fifty years ago he began the day by doing chores about the farm, taking care of the animals, mending a piece of harness or part of a wagon. Then he went to school and got the "book learning" that he could not get at home, and after school he played in the fields, or stopped in at a blacksmith shop or carpenter shop and watched a friend at work and learned to handle tools himself. All this work on the farm and in small shops was education, and the schoolhouse simply supplemented it—and not very efficiently at that. We often hear men of an older generation say that they accomplished a great deal in life, "and yet the only education I received was in the little red schoolhouse." But, as a matter of fact, that was *not* the only education they received. The large part of their education they received outside of school in meeting real situations that had to be solved, and having the opportunity to experiment, to handle tools, to invent new ways of doing things.

But times have changed. During the past 50 years has come the growth of the modern cities until now half the population of the country is concentrated in them. And the city, whether large or small, is a poor place for raising children because it deprives them of the healthy, wholesome work and play which are essential elements in their education. Children in the cities no longer get the chance to take part in activities about the home or in the community life, which formerly were so educational in character, for the reason that such activities are no longer carried on in the home.

In a modern city home, the clothes, furniture, and to a large extent the food, are made outside the home—and very often the eating is done outside the home. We often hear the fact deplored that "the home is not what it was," and that "if fathers and mothers would look after their children more" things would be as they used to be. But things would not be as they used to be for the simple reason that the economic facts in regard to the home are not what they used to be. It is not the parents' fault nor the children's. Economic changes have taken certain simple fundamental educational activities out of the home, and neither optimism nor hope will put them back in again. The modern city—and Washington is like all others in this respect—fails to give children the opportunity to create things with their brains and hands which the simpler farm environment of a generation ago made possible.

But children will find a way to express their desire to "do things," to take things apart and put them together again, to find out "how

things work." If they can not do this legitimately and constructively, they will do it behind their elders' backs, and destructively. And because it upsets the smooth working of our adult world we call it mischief. As a matter of fact, mischief in the modern city child is often nothing but the expression of a thwarted instinct for self-expression and creative work.

THE CITY DEPRIVES CHILDREN OF PLAY.

Changed social and industrial conditions have not only deprived children of the opportunity for wholesome creative work, but—what is even more serious—modern cities have taken away from children the opportunity for wholesome play.

Cities are the lost playgrounds of children. The city gradually extends until there is little or no free-play space left, and the children are driven to the streets as their only place for play. As a matter of fact, children in a modern city spend twice as much time being educated on the streets as they spend being educated in school. On the basis of the 365 days of the year, children are under the supervision of the school on an average of not more than 2½ hours a day. Investigation has shown that all other child-welfare agencies do not occupy a child's time on an average of more than 10 minutes a day. It is safe to say that the city home can not keep a child wholesomely occupied for more than 6 hours a day. Adding 10 hours for sleep, there are still more than 5 hours to be accounted for, and, as is well known, these hours are spent by the children on the city streets. And the street is a most efficient teacher. A child will remember what he learns on the street far longer than what he is told to remember while sitting at a school desk.

In other words, what the fathers and mothers of city children have to face is the fact that, judged both by efficiency in getting results and by the length of time which children are under its influence, the city street—and not the home or the school—is educating the mass of children in our cities to-day. Can any community afford to let such a condition continue to exist?

Washington is a comparatively small city, yet there is no public playground, and the playgrounds around the school buildings are entirely inadequate. The result is that children have to play on the city streets, and since this has resulted in a number of accidents a campaign is now on to prevent their playing in the streets. But in spite of such a campaign, it may safely be prophesied that they will continue to play in the streets and continue to be hurt until adequate play space is provided for them.

LITTLE OPPORTUNITY FOR WORK OR PLAY IN THE TRADITIONAL SCHOOL.

Such are the conditions surrounding children's lives in the modern city *outside* of school. In the meantime, *in school* the majority of children get only school seats in classrooms.

It is true that new educational ideals and new educational methods have developed very rapidly in the past 50 years, in response to the demands of changed social and industrial conditions, until now the actual subjects in the present curriculum include far more than the original three R's.

For example, the Washington public elementary schools include in their curriculum most of the subjects taught in a modern public school. But while the schools have added these subjects in response to changes in social and industrial conditions, the teachers are being compelled to teach them in buildings adapted to the three R instruction of a hundred years ago. It is asking too much of any teacher; for no teacher, however gifted, can make bricks without straw. To ask them to teach not only the three R's but drawing and music and nature study, and even physical training, in classrooms full of school seats is asking the impossible.

Good workmanship can not be taught by talking about it in a classroom instead of giving children a chance to work in shops, cooking rooms, sewing rooms, and drawing rooms. Scientific curiosity can not be encouraged and developed by reading about experiments in physics and chemistry instead of having the opportunity actually to conduct experiments in well-equipped science laboratories; and healthy bodies can not be developed by assigning lessons in a hygiene textbook, or by having children go through two or three minutes of physical training in a classroom full of school seats.

Children, like adults, learn to live by *living*. Studying books is only a part, though an important part, of living. Working and playing; experimenting, testing, and making mistakes; constructing something; reading and studying; growing healthy and strong through play; learning to play and work with each other; and expressing to ourselves and to one another more or less adequately and beautifully what we think and feel about it all—*that* is living. These are the things that all of us are doing or trying to do all the time—except in school. Yet, presumably, the purpose of the school is to help children to do more adequately and efficiently and joyfully what they are going to do anyway.

A school building with nothing but classrooms, such as is found in Washington, N. C., can not fulfill this purpose, for it bears little relation to life. It is like nothing which children will meet in life outside of school, either while they are children or when they grow up. It is like nothing in the world but itself, and it has outgrown its usefulness.

THE MODERN SCHOOL BUILDING MUST PROVIDE THE OPPORTUNITIES FOR WORK AND PLAY WHICH THE HOME CAN NO LONGER SUPPLY.

It is for all these reasons that there has come to be a general recognition of the fact that the city school must not only supply the opportunity for study in good classrooms under wholesome conditions, but it must also return to children the opportunity for the healthy work and play which the home can no longer supply. This means that the modern city school building must have not only classrooms but shops, science laboratories, drawing and music rooms, cooking and sewing rooms, auditorium and gymnasiums, and there must be ample playground space about the school. *And the elementary school building must have these facilities as well as the high school.*

But how is a modern city to develop a building program which will not only eliminate congestion but also provide these modern educational facilities?

IMPOSSIBLE TO ELIMINATE CONGESTION ON THE RESERVED-SEAT BASIS, OR THE "PEAK-LOAD" PLAN.

The answer is that these results can not be accomplished until it is realized that no growing city can even eliminate congestion (not to mention providing modern educational facilities) on the basis of a reserved seat for every child, any more than railroads could function if each citizen had to have his own private car seat for his own exclusive use during the entire year.

In other words, the public-school system can not expect to eliminate congestion if it continues to operate on what is known among engineers and business men as the "peak-load" basis, i. e., concentrating the greatest number of children at any one time in one place, leaving all other facilities unused. Yet that is exactly what is happening at the present time. According to the traditional school plan all children have to be in school seats at 9 o'clock, or whenever the first period begins, and remain there until 12, when they all go home to lunch. They all return at 1 o'clock and study in school seats until 3, when they are all turned out into the parks and playgrounds for play. Apparently, the traditional school is run on the assumption that all persons in school want to do, or ought to do, the same thing at the same time. Yet, if we applied that principle to any other public utility, as completely as we do to the school, it would be impossible for our social and industrial mechanism to work.

As one prominent educator has pointed out, the modern city is largely the result of the application of the principle of the *common use* of public facilities which each person in the community needs for his *personal* use only part of the time. "For example, public parks are run on the principle that not all people will want to use parks at

the same time and that there is hardly any time when no one wants to use the parks. Obviously, a park system which insisted that people use the parks from 3 to 5 o'clock 5 days a week for only 200 days during the year would be extremely extravagant. And yet we run our public-school system so that children can not use playgrounds except between 3 and 5 o'clock 5 days a week. In many cities hundreds of thousands of dollars are invested in playgrounds and yet these playgrounds are empty of school children all day until 3 o'clock in the afternoon. In fact, in some cities if a child is found on the playground before 3 o'clock, he is driven off because he is playing truant. Obviously, the playgrounds exist for the use of the children and yet children have the opportunity to use them only a few hours a day, because the traditional school program says that they must be in school seats from 9 to 12 and from 1 to 3."

Our transportation system is made possible because of the fact that all people do not wish to ride at exactly the same time; concerts and theaters are made available to many people because one person can use another's seat when he does not want to use it. Hotels can accommodate thousands of people because they are not run on the principle of reserving each room for the exclusive use of a single individual during the entire year. Yet a hotel room used only four days during the year would be in use longer than the average school auditorium is used during the year. How can any city afford to have sufficient school auditoriums if they are to be used *regularly*, as they are now, only 15 or 20 minutes a day?

OTHER PUBLIC-SERVICE UTILITIES OPERATE ON THE PRINCIPLE OF MULTIPLE USE OF FACILITIES. WHY NOT THE SCHOOL?

In other words, all public-service institutions except the school endeavor to *balance* the load by operating on the principle of a multiple use of facilities all the time. There would seem to be no good reason why this principle of multiple use of facilities should not also apply to the school. There would seem to be no good reason why all children should be in classrooms at the same time, nor why the auditorium and playground and shops should be in use only a fraction of the day. The fact is that there are many things in school as well as out of school that all people do not want to do at the same time, or can just as well do at different times. Moreover, from an educational standpoint, there is obviously no reason why children should all have to do the same thing at the same time. In fact, the whole trend of modern educational practice is away from such a lock-step system.

Furthermore, it is difficult to see how the problem of providing enough classrooms or playgrounds or special facilities for the mass of children is ever to be met if all children have to be in classrooms at

the same time and if all children have to play at once. Washington might spend thousands of dollars and yet it is safe to say that each year there would be an insufficient number of classrooms. Such a statement is based not merely on the general principle just referred to. It is also based on facts gathered in school building surveys made by the Bureau of Education in 10 States during the past two years.

If, however, the principle of multiple use of facilities is applied to the public school it is financially possible to eliminate congestion and provide not only adequate classroom accommodations but also auditoriums, gymnasiums, laboratories, shops, cooking and sewing rooms, and drawing and music rooms for the mass of children. In fact, in working out a building program, accommodations may be provided in all facilities if they are used constantly by alternating groups at less cost than regular classrooms may be provided on the basis of a reserved seat for every child.

THE WORK-STUDY-PLAY, OR BALANCED-LOAD, PLAN MAKES IT FINANCIALLY POSSIBLE TO ELIMINATE SCHOOL CONGESTION AND PROVIDE MODERN EDUCATIONAL FACILITIES.

A different type of school organization and a different plan of operation from the traditional are required in order to do this. Fortunately, such a type of organization has been worked out by school authorities and has demonstrated its ability to effect these results. It is known as the work-study-play, or platoon-school, plan; and it is now in operation in some 53 cities in the country, including cities of such diverse types as Detroit, Mich.; Pittsburgh, Pa.; Troy, N. Y.; Winnetka, Ill.; and Newark, N. J.

The slogan of the work-study-play plan might be said to be "a seat for every child *when he needs it*, and also modern educational facilities for work and play and adequate time to use them."

The plan grew out of a recognition of the fact that the growth of city conditions makes the educational problem far more difficult than formerly; in fact, has created a new school problem. The plan makes it practicable both administratively and financially for school administrators to provide (what all progressive school administrators wish to provide for children) not only classroom accommodations but also auditoriums, gymnasiums, shops, science laboratories, etc., where children may be kept wholesomely occupied in study and work and play.

HOW IT WORKS.

The work-study-play plan does this by balancing the load so that half the children in a school are in classrooms while the other half are at work and play in well-equipped shops, laboratories, auditoriums,

and playgrounds. For example, a school is divided into two parts each having the same number of classes, and each containing all the eight or nine grades. The first part, which we will call the "A school," comes to school in the morning, say, at 8.30 or 9, and goes to classrooms for academic work. While this school is in the classrooms it obviously can not use any of the special facilities, therefore the other school—B school—goes to the special activities, one-third to the auditorium, one-third to the playground, and one-third is divided among such activities as the shops, laboratories, drawing, and music studios. At the end of one or two periods; that is, when the first group of children has remained, according to the judgment of the school authorities, in school seats as long as is good for them at one time, the A school goes to the playground, auditorium, and other special facilities, while the B school goes to the classroom.

The following is one type of program that may be used. In this program each school (A and B) is divided into three divisions: Division 1, upper grades; division 2, intermediate grades; division 3, primary grades.

Under such a program it is obvious that only half as many classrooms are needed as under the traditional system. For example, in a 50-class school (2,000 pupils) under the traditional plan, 50 classrooms are needed in addition to all special facilities. Under the work-study-play plan, only 25 classrooms are needed, since only half the children are in classrooms at any one time. Therefore, under this plan, the cost of 25 additional classrooms is eliminated. The average cost of a classroom in this country at the present time for a school of that size is $10,000. Since only half the ususal number of classrooms is required under the work-study-play-plan, i. e., 25 classrooms in a 50-class school, the cost of the remainder is released for all the other special facilities.

EDUCATIONAL ADVANTAGES OF THE PLAN—AN ENRICHED CURRICULUM.

The important point about the balanced-load plan, however, is not its economy, but the fact that it makes possible an enriched education for children. Under this plan the children not only have the same amount of time for reading, writing, arithmetic, geography, and history as formerly, 210 minutes, but also 50 minutes of play every day, 50 minutes of auditorium a day, and 50 minutes of shopwork every day in the week for a third of the year; science every day for a third of a year; and drawing and music every day for a third of a year. At present, children get in most schools in the country a 10-minute recess period for play, a few minutes for opening exercises in the auditorium, and a few minutes a day or two periods a week for special activities often carried on in the regular classrooms.

FLEXIBILITY OF THE PROGRAM MEETS INDIVIDUAL NEEDS OF CHILDREN.

A program based upon the multiple use of facilities also makes it possible to have a flexible program. After all, schools were created for children and not children for the schools, and it should be possible to adapt the program to meet the needs of individual children instead of making children conform to the program, as is too often the case. A study of the different types of work-study-play schools, in different parts of the country, shows that it is possible to adapt the program to the needs of different types of children and different types of communities.

For example, a child who is backward in a special subject, such as arithmetic, and is held back in a grade because he can not master that subject, and is growing discouraged because he has to repeat the whole year's work, can double up in arithmetic for a number of weeks by omitting the auditorium period until he has made up the work and is ready to go on with his grade in that subject. In the meantime, he has not been held back in other subjects, but has progressed as rapidly in them as he is able to. Or, if a child has a particular talent in some subject, he can, under this program, double his time in that subject by omitting his auditorium period a number of times a week and yet not lose any time from his regular work.

Again, it is possible to adjust the time of beginning or leaving school to meet the desires of parents. For example, it is possible to arrange to have the school begin at 8.30, 8.45, or 9 a. m., or any other hour desired. Or, if the school begins at 8.30 and certain parents object to having their children leave for school so early, it is possible to put these children in the "B school," which begins the day with special activities; in this case the children can omit the play period or auditorium from 8.30 to 9.20 and arrive at school at 9.20. Or, again, many parents prefer to have their children take special music lessons after school. It often happens that home work or staying after school interferes with these lessons. Under the work-study-play plan it is possible to put such children in the "A school" and let them omit the play period or the auditorium in the afternoon from 2.40 to 3.30. There is, of course, no reason why children should not be given credit for these out-of-school activities if so desired. As for special facilities in school, each community and each section of the city can have the special facilities which the school authorities and the parents desire.

OPPORTUNITY FOR SHOP WORK.

Another advantage of the program of the work-study-play schools is that it makes it possible to give adequate time and equipment for manual work. The object of shop work in the public schools is of

course *not* to make mechanics of children 12 to 16 years of age, or even to prepare them to become mechanics. Such a program would be most undesirable and unfair to the children even if it were possible of accomplishment, which of course it is not. There is no place for specialized trade training in the public elementary school. But working with tools, not for training for trade, but for its educational value as one of the educational experiences of the race, is something which all children should have the opportunity to take part in. Nearly all children like to work in shops, drawing studios, and science laboratories; and they should have the chance to do so, whether they are going to be lawyers or carpenters, whether they are going to college or directly to work.

At the present time, in the average school only comparatively few children get the opportunity to do any constructive work in school with their hands and they get it for only few minutes a week, concentrated usually in two days. Under the work-study-play plan it is possible for children to have 40 or 50 minutes a day every day in the week in shopwork, science, or drawing and music, and since the program can be so arranged that they can begin such work at the fourth grade, it is possible for them to take part in a variety of activities before they graduate, so that they can find out what they do *not* like as well as what they like.

The large majority of children who drop out of school would be much better off in school until they are 16 or more if the school met their needs, but it is impossible to expect them to stay in an all-study school in which they have little opportunity for the constructive work which most children like. The work-study-play school makes it financially and administratively possible to furnish such activities for children, and thus tends to keep them in school longer. Furthermore, this work is of course a great reinforcement to the academic work since it gives practical significance to arithmetic and English and history. In fact, the special activities increase the time spent on academic work.

CHILDREN ARE NATURAL SCIENTISTS.

Children are natural scientists. In every hour of their waking lives out of school they are experimenting and testing, observing, collecting, and classifying. It is only in school that they get no opportunity to experiment. There is practically no science work in the elementary school with the exception of a little nature study. The result is that the spirit of scientific curiosity, which is so strong in children, is now being starved in the elementary schools instead of being fed and developed. By the time children get to the high school, the eagerness of their curiosity has been dulled by inactivity, and in its place other interests, which often have their genesis on the

city streets, have developed. Furthermore, only 13.9 per cent of all the children in the country ever complete high school. Consequently, the majority of children never get any training in the subject which is the foundation of all our social and industrial life, and which is richer in educational content than any other subject in the curriculum.

But science can not be taught in a classroom with school seats and no equipment, and it can not be carried on effectively under a program which permits such work only twice a week. Under the work-study-play plan, it is financially possible to provide well-equipped science laboratories and it is administratively possible for every child to get 40 or 50 or 60 minutes a day of science work every day in the week for a third of each year or more.

THE VALUE OF THE AUDITORIUM.

In the traditional school the auditorium is used regularly for auditorium purposes only 15 or 20 minutes a day for opening exercises. In Washington it is not used so often as that. By failing to utilize an auditorium, the school for years has left unused a feature of school work which is of the greatest educational value.

Under the work-study-play plan the auditorium is used every period of the day by different groups of children, since one-sixth of the school is always in the auditorium and one-sixth on the playground.

Since a description of what has *already* been accomplished in a new line of work is always more convincing than a statement of what *may* be accomplished, we shall quote that part of the annual report of the board of education of Detroit which deals with the auditorium. Detroit already has 42 schools operating on the platoon or work-study-play plan.

> The auditorium of the platoon school adds to the elementary school an entirely new and important socializing unit which the traditional school did not have. The possibilities of this unit are almost unlimited. When its possibilities are finally worked out and realized, it will probably be found to be the most effective educational force in the entire organization.
>
> The auditorium does not have the atmosphere or the paraphernalia of the schoolroom. It has rather the general spirit of freedom from restraint found in an ordinary public assembly. * * * The platoon school provides 30 minutes daily in the auditorium for every pupil. * * * The auditorium accommodates 960 pupils at least every day. * * *
>
> The auditorium as an integral part of the elementary school has two distinct functions:
>
> 1. As a socializing unit.
> 2. As an integrating and correlating unit. * * *
>
> All auditorium activities have behind them the social motive. Thus in this unit of the school our best-equipped teachers consciously and definitely attempt to train children for social life and for citizenship. The development of auditorium possibilities is still in an experimental stage, but enough has been done to convince the most skeptical that this is an educational factor which is destined to be recognized in

the future not only in elementary education but in intermediate and secondary schools as well. * * *

Auditoriums are equipped with apparatus for the projection of slides and moving pictures. The board of education has a collection of 8,000 educational slides that are available at all times so that some stereopticon work may be done daily. One day each week the entire time of the auditorium is given over to moving pictures. Advance notices of the films to be shown are sent to schools, and films adapted to both primary and grammar grades are selected.

Auditoriums are supplied with phonographs, and a library of records is owned by the board of education. Pupils constantly hear good vocal and instrumental music, and one day a month a special teacher of music visits each auditorium to conduct auditorium classes especially intended to develop musical appreciation. * * *

The platoon school has in the auditorium that which the traditional school does not have, an integrating, correlating force. * * * Of what value is the training in arithmetic, grammar, and geography if the pupil goes forth into life socially unfit? It is highly desirable that the experiences which the pupil has in the home room, the gymnasium, the playground, the music room, the literature room, or the studio shall be revived again in the auditorium, where they may be reinterpreted for him in terms of their social value. * * * The pupils easily come to realize the relationship between the physical exercises of the gymnasium and the health talks of the auditorium; between the geography lessons of the home room or science room and the stereopticon pictures and moving pictures of the auditorium; and between the story-telling in the literature room, the music and singing in the music room, and the Mother Goose operetta in the auditorium.[2]

THE SCHOOL TAKES OVER THE STREET TIME OF THE CHILD.

As has been pointed out, one of the most undesirable elements in the life of city children is the street life in which they have hitherto spent so large a part of their time. Obviously, because of the conditions of modern city life, it is necessary that the school take over some of the time now spent by the child on the city streets. The work-study-play plan does this by lengthening the school day an hour or two as each community may desire, and by offering to the children the wholesome activity in shops and laboratories and on the playgrounds which is so essential for them.

THE WORK-STUDY-PLAY PLAN NOT AN UNTRIED METHOD OF SCHOOL ORGANIZATION.

The work-study-play plan is not an untried method of school organization. It has been in operation for the past 12 or 15 years, and it has been worked out in communities of widely different character—large industrial centers like Detroit, Mich., small towns like Stuttgart, Ark., and residential suburbs like Winnetka, Ill., and Sewickley, Pa. The Bureau of Education has at present information that the plan is in operation in 53 cities in 21 States. The cities are as follows:

Akron, Ohio; Baltimore, Md.; Birmingham, Ala.; Cuyahoga Falls, Ohio; Dallas, Tex.; Denver, Colo.; Detroit, Mich.; Dormont, Pa.; Duluth, Minn.; East Chicago,

[2] The platoon school in Detroit, Detroit Educational Bulletin No. 2, pp. 30-37.

Ind.; Elizabeth, N. J.; Ellsworth, Pa.; Carson College, Flourtown, Montgomery County, Pa.; Fort Smith, Ark.; Franklin, N. J.; Gary, Ind.; Greenwich, Conn.; Hazleton, Pa.; Ithaca, N. Y.; Kalamazoo, Mich.; Kansas City, Mo.; Memphis, Tenn.; Moneseen, Pa.; Montclair, N. J.; Mount Vernon, N. Y.; New Castle, Pa.; Newark, N. J.; Oakmont, Pa.; Passaic, N. J.; Philadelphia, Pa.; Pittsburgh, Pa.; Rochester, N. Y.; Rockford, Ill.; Sacramento, Calif.; Saginaw, W. S., Mich.; Seattle, Wash.; Sewickley, Pa.; South Bend, Ind.; St. Paul, Minn.; Stuttgart, Ark.; Troy, N. Y.; Warren, Ohio., Washington, D. C.; Wilmington, Del.; Winnetka, Ill.; Youngstown, Ohio; Durham, N. C.; Asbury Park, N. J.; Braddock and Portage, Pa.; Long Beach, Calif.; New Britain, Conn.; and Port Arthur, Tex.

SCHOOL SUPERINTENDENTS TESTIFY THAT WORK-STUDY-PLAY PLAN IMPROVES ACADEMIC WORK, GIVES ENRICHED EDUCATION, IMPROVES HEALTH OF PUPILS.

School superintendents from 46 cities, in which it has been in operation, have reported upon it, and have stated that it improves the academic work, offers superior training in special activities, improves the physical condition of pupils, and represents a great saving in classroom space and in cost of building.

The recommendations in regard to the building program, which will now be submitted, have been worked out on the basis of the traditional plan of school organization and also of the work-study-play plan of school organization which has just been described.

AIM OF THE BUILDING PROGRAM SUBMITTED IN THIS REPORT.

In making out the building program for the schools of Washington, N. C., the aim has been to accomplish the following things:

First, to relieve present congestion and provide for an increase in growth for at least 10 years.

It would be most unfortunate if Washington should plan its building program without providing for growth of school population for at least 10 years. If, for example, the city should plan for an increase for only 5 years, then by the time the buildings were up the schools would be congested again, and it would be necessary within a year or two to ask for another bond issue.

Second, to plan a building of the expansible type so that it may be added to without great expense. The E-shaped building is probably the best for this purpose since it is possible to add classrooms with little expense without changing the character of the building.

Third, the cost of the program has been worked out after a careful study of building costs in the country as a whole and with the best available information as to building costs in Washington, N. C. The cost of school buildings is now down to 25 cents per cubic foot in many parts of the country and authorities in Washington estimate that the school buildings can be erected in that city for the same amount. This makes the cost of the building $10,000 per classroom unit. "Classroom unit cost" includes the cost of corridors, stair, principal's office, teachers' rest room, toilets, etc.

Fourth, the cost of equipment has been included in the amount necessary for the buildings. The importance of providing modern equipment can not be too strongly emphasized. Too often communities make the mistake of providing only enough funds for the shell of the building, and almost no funds for the equipment. This is comparable to erecting a factory for turning out automobiles and providing no funds for machines or tools. It is futile to provide workshops for children without providing tools for them to use in the workshop; furthermore, an inadequate supply of tools is only a handicap and an exasperation.

Fifth, the buildings should be of fireproof construction. The estimate of cost of buildings will probably come as a surprise and shock to many a citizen. This is because, up to the present time, Washington has not had the habit of erecting modern fireproof buildings for its children. It can not afford, however, not to change that policy. Great care is taken nowadays that modern office buildings, in which adults work, should be of fireproof construction.

For example, one of the most recent buildings erected in Washington is the National Bank Building, which is of the most modern type, and cost $133,000. And yet, up to the present time, the total amount of money spent for school buildings in Washington is $37,000, and no school building is of fireproof construction. Is not the safety of 1,600 children as important as the safety of adults who work in banks? Again, all modern factories are fireproof, and all hospitals are fireproof. Is not preservation of the lives of school children of a city as important as the preservation of its material products? Is it not as important to protect children before they have to be sent to hospitals as after they arrive there?

Sixth, the aim has been to work out a building program which will give modern school facilities to *all* the children in the public-school system of Washington. Too often there is a tendency to invest all the available funds in one building which can only be used by a minority of the children. This is neither democratic nor fair to the children of the city. The city's funds should be so spent that all children would receive the opportunity for a modern, all-round education.

Seventh, the building program has been worked out on the basis both of the traditional type of school organization and of the work-study-play type of organization. It is not urged that Washington adopt the newer type organization, but, in view of the fact that many cities are now organizing their schools on the work-study-play basis, it is recommended that a careful study be made of this plan and that, to this end, the board of education authorize the superintendent of schools to visit cities in which the plan is in operation, in order to make a thorough study of it and see how it can be adapted to Wash-

ington. It is further suggested that it would be desirable for the members of the board of education themselves to visit cities in which schools are organized on the basis of this modern type of organization.

RECOMMENDATIONS FOR A BUILDING PROGRAM.

WHITE SCHOOLS.

It is recommended that the high school, consisting of the seventh, eighth, ninth, tenth, and eleventh grades, remain in the present white-school building, and that a new elementary-school building be erected for the first six grades on the site already purchased on ———— Street between Fourth and Fifth Streets. Ultimately, the present building should be abandoned, and all the pupils from grade 1 to 12 housed in one building.

A NEW ELEMENTARY-SCHOOL BUILDING FOR THE FIRST SIX GRADES.

The enrollment to be provided for would be as follows:

Enrollment (1920–21)	720
33 per cent increase for 10 years	237
Total	957

Or 24 classes.[3]

Under the work-study-play plan, in a 24-class school 12 classrooms would be needed. There should also be an auditorium, and a gymnasium, and at least 6 special facility rooms—for example, 2 shops for boys, 1 cooking room for girls, 1 sewing room, 1 drawing room, and 1 nature-study room. This would make 18 units in all. The classroom unit cost is $10,000. Therefore, the cost of the building would be $180,000, plus $50,000 for an auditorium and gymnasium. The cost of the equipment would be $18,000. The total cost for building and equipment would be $248,000.

Under the traditional plan, it would be necessary to have 12 additional classrooms at a cost of $10,000 each, or a cost of $120,000, with additional equipment $6,000. This would make a total cost under the traditional plan of $374,000.

ADDITION AND EQUIPMENT FOR THE HIGH SCHOOL.

The enrollment to be provided for in grades 7–11 is as follows:

Enrollment (November 1, 1921)	309
33 per cent increase for 10 years	101
Total	410

Or 14 classes.[4]

There are 16 classrooms in the present white school building. Seven of these could be used for academic work and the other nine

[3] Forty pupils to a class.

[4] Thirty pupils to a class.

rooms for special activities, plus two rooms in the basement for cooking and shopwork.

There is practically no modern equipment in this building. In order to do high-school work nine rooms should be set aside for special activities. The list of special activities and cost of equipment for each activity is given as follows:

EQUIPMENT.

1 chemistry laboratory	$1,500
1 physics laboratory	1,500
1 print shop	2,000
1 woodworking shop	2,000
1 cooking room	2,000
1 sewing room	1,000
1 commercial room	1,000
1 mechanical-drawing room	500
1 music room	500
Total	12,000

The present high school has no gymnasium; therefore, one should be constructed, probably at the rear of the auditorium, and it should be so built that the auditorium could be enlarged sufficiently so that real plays could be given on the stage. The cost would be approximately $25,000; equipment, $2,000.

Under the traditional plan, the cost would be the same for the high school as under the study-work-play plan.

The total cost for the new elementary school and the high school under the work-study-play plan would be as follows:

One new elementary-school building for grades 1-6	$248,000
Gymnasium and equipment for present high-school building	39,000
Total	287,000

Under the traditional plan, the cost for both of these schools would be $413,000, or $126,000 more than under the work-study-play plan.

NEGRO SCHOOLS.

Total enrollment of the negro schools in 1920–21 was 711, or 18 classes. There has been a 68.4 per cent increase in enrollment in the 10 years since 1910–11. A new building should be erected on a new site to accommodate the following enrollment:

Enrollment (1920–21)	711
25 per cent increase [1]	177
Total	888
(Or 22 classes.)	

[1] The increase provided for is only one-half the increase which has taken place in the past 10 years, but the lower figure has been used because it is contended by the school authorities that the large increase in the past 10 years was due to the stricter enforcement of the compulsory education law, and that the increase in the negro population, in the last 10 years, has not been proportionately as great as for the white population.

Under the work-study-play plan, 11 classrooms would be needed and at least 4 special rooms—1 shop, 1 cooking room, 1 nature-study room, 1 drawing room. This would make 15 units.

Cost of 15 units	$150,000
Auditorium and gymnasium	50,000
Equipment	11,000
Total	211,000

Under the traditional plan, 11 more classrooms would be needed at a cost of $110,000, plus $5,500 for equipment, making a total of $326,500.

Summary of cost of building program.

School.	Under work-study-play plan. Cost of—			Under traditional plan. Cost of—		
	Building.	Equipment.	Total.	Building.	Equipment.	Total.
White:						
New elementary school for grades 1-6	$230,000	$18,000	$248,000	$350,000	$24,000	$374,000
Gymnasium and equipment for high school	25,000	14,000	39,000	25,000	14,000	39,000
Total	255,000	32,000	287,000	375,000	38,000	413,000
Negro:						
One new building for grades 1-9	200,000	11,000	211,000	310,000	16,500	326,500
Total cost for white and negro schools	455,000	43,000	498,000	685,000	54,500	739,500

WASHINGTON CAN NOT AFFORD NOT TO GIVE A MODERN SCHOOL PLANT TO ITS CHILDREN.

In view of the small amount of money which has been expended up to the present time upon public-school buildings in Washington, a bond issue of $500,000 will probably seem a large amount to the average citizen. It should be remembered, however, that this $500,000 is really taking care of school needs for 20 years, i. e., for the 10 years since 1910, when Washington completely failed to supply adequate housing facilities for its children, and also for the 10 years from 1921 to 1931. In other words, by issuing bonds for $500,000, Washington will have spent only $25,000 a year on school buildings for 20 years, or only $14 a year per child. This is certainly not an exorbitant amount for a city to spend on its children. Furthermore, it is less than Washington is under the obligation to spend for schools, inasmuch as it has been spending far less than the average city of its size on public schools.

For example, in 1918, Washington's tax rate in mills on the basis of its true property valuation was 2.53. Compared with 442 other cities of the same population group, Washington was thirty-fourth

from the bottom of the list in its tax rate for schools, and the proportion, in 1920, was not materially different.[5]

Again, Washington's per capita expenditure, in 1918, was $22.50. The average for 45 cities for the same population group was $47.51. In other words, Washington's per capita expenditure for schools was less than half that of the average for cities of the same population group. And, although the per capita expenditure, in 1921, rose to $32.71, yet the average increase for other cities was also $10, so that her relation to them was the same as in 1918.[6]

The truth is that for years Washington has been behind in its expenditure for school purposes and in its appropriations for school buildings, until now the children are housed under conditions which are a menace to their health and strength and moral and intellectual development. This means that Washington now has to pay for its past neglect.

It is understood that because of the issuance of bonds for street improvements, etc., the expenditure of an additional $500,000 for school buildings may be considered more than the city can afford at present. It is suggested that any citizen who is inclined to that point of view visit the dilapidated old dwelling houses into which little children of 7 and 8 years of age are crowded in badly ventilated, badly heated, badly lighted rooms, and then decide whether Washington can afford *not* to issue school bonds for $500,000 to save the health and strength of its own children.

[5] See Statistics of public-school systems, by H. R. Bonner, U. S. Bu. of Educ., Bul. 1920, No. 24, p. 161.