

DEPARTMENT OF THE INTERIOR  
BUREAU OF EDUCATION

BULLETIN, 1921, No. 28

## EDUCATIONAL SURVEY OF WHEELING, WEST VIRGINIA

A REPORT OF A SURVEY OF THE PUBLIC SCHOOLS  
OF THE INDEPENDENT SCHOOL DISTRICT OF WHEEL-  
ING, WEST VIRGINIA, MADE AT THE REQUEST OF THE  
BOARD OF SCHOOL COMMISSIONERS, UNDER THE  
DIRECTION OF THE UNITED STATES COMMISSIONER  
OF EDUCATION



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LETTER OF DR. P. P. CLAXTON TO THE PRESIDENT OF THE  
WHEELING BOARD OF EDUCATION.

Hon. PAUL O. REYMANN,  
*President, Board of Education, Wheeling, W. Va.*

MY DEAR MR. REYMANN: In accordance with the arrangement entered into with the Wheeling Board of Education, I have caused a careful study to be made of the public school system of your city, and have received preliminary reports from the members of the survey commission designated to do the field work.

As requested by you, I have had prepared a brief digest, or summary of the principal conclusions and recommendations, in order that these may be distributed in printed form to the members of your board and to others interested.

Accompanying this summary, I am sending also partial reports, or sections of the report, which present a portion of the supporting evidence and the argument for certain of the recommendations. I am making an effort to get as much as possible of the report into your hands in time for appropriate action in the emergency caused by the early termination of the recess taken by the West Virginia State Legislature.

I believe you have in the material presented herewith sufficient data to enable you to formulate your petition to the legislature. The remainder of the report I hope to place in your hands within the next two or three weeks.

Permit me to thank you and, through you, all the members of the board and the teaching staff for the hearty cooperation which all concerned have manifested toward the work of the survey, and to express the hope that the final result will be found in improved educational opportunities for the children and youth, as well as the maturer citizens of Wheeling, and increased utilization of these opportunities by all.

Very truly, yours,

P. P. CLAXTON,  
*Commissioner.*

WASHINGTON, *March 10, 1921,*

## MEMBERS OF THE SURVEY COMMISSION.

The members of the commission appointed by the Commissioner of Education to make the survey of the public schools of Wheeling, and to report to him their findings and recommendations, are as follows:

### From the Bureau of Education.

- Dr. William T. Bawden, assistant to the commissioner, director of the survey.
- Mrs. Henrietta W. Calvin, specialist in home economics.
- Miss Nina C. Vandewalker, specialist in kindergarten and primary education.
- Miss Florence C. Fox, specialist in educational systems.
- Mrs. Alice Barrows Fernandez, specialist in industrial and economic relations in education.
- Miss Julia B. Tappan, assistant in school hygiene.

### From Outside the Bureau of Education.

- Dr. J. Franklin Bobbitt, professor of educational administration, University of Chicago, Chicago, Ill.
- Mr. Ralph Bowman, specialist in school finance and accounting, United States Bureau of Efficiency, Washington, D. C.
- Dr. Willard S. Small, director of educational research and development, Interdepartmental Social Hygiene Board, Washington, D. C.
- Dr. Chester A. Buckner, professor of secondary education, University of Pittsburgh, Pittsburgh, Pa.
- Dr. Thomas Alexander, professor of elementary education, Peabody College for Teachers, Nashville, Tenn.
- Dr. Fletcher B. Dresslar, specialist in school architecture, buildings, and grounds, Peabody College for Teachers, Nashville, Tenn.
- Mr. Walter H. Klar, director art department, University of Pittsburgh, Pittsburgh, Pa.
- Mr. Lynton F. Garrett, principal of the Training School, State Normal School, San Marcos, Tex.

## INTRODUCTION.

On December 17, 1920, the president of the board of school commissioners inquired concerning the possibility of having a survey of the public schools made under the direction of the United States Commissioner of Education. The conditions named were met by the board at a special meeting held on December 30, and an appropriation of \$5,000 was made to cover the necessary expenses of the survey. The members of the survey commission, as indicated on the preceding page, were appointed by the Commissioner of Education, and the field work began on Monday, January 17.

The field work was completed on March 10; most of the work was done during February. The aggregate number of days devoted to field work was approximately 200.

On Thursday evening, March 10, the director of the survey made a report of the conclusions and recommendations at a special meeting of the board of school commissioners, and a digest of the report was given to the press for release on the morning of the 12th. On Friday evening the report was made public at a meeting of representatives of the board, various civic organizations, and the press through the distribution of a printed pamphlet of 53 pages.

## THE SURVEY BUDGET.

The principal items of expenditure in connection with the survey may be summarized as follows:

Transportation and subsistence of members of the commission.....	\$1,796.91
Honoraria of members of the commission not connected with the United States Bureau of Education.....	1,850.00
Materials used in educational tests.....	47.09
Clerical assistance.....	399.92
Printing preliminary report.....	348.00
Supplies, telephone, telegraph.....	80.52
Total, to April 5, 1921.....	4,522.44

# EDUCATIONAL SURVEY OF WHEELING, WEST VIRGINIA.

## I. ORGANIZATION AND ADMINISTRATION OF THE SCHOOL SYSTEM.

### INTRODUCTORY.

The independent school district of Wheeling was established by act of the Virginia Legislature, in Richmond, February 23, 1849. It was then, and has since been maintained, entirely independent of all other school corporations, general school legislation, and even of the municipal corporation of Wheeling—notwithstanding, at present, more than two-thirds of the area of Wheeling lies outside the independent school district.

Originally the board of school commissioners consisted of five members. Subsequent legislation to all intents and purposes divided the independent school district into seven relatively autonomous subdistricts, and provided for the present board of 21 members. In certain important respects this board functions as seven relatively independent local boards, and exercises executive control over such technical matters as appointment of teachers, administration of the school buildings, and the like.

A good type of personnel appears to have been attracted to the office; and the subdistricts have acquired a tradition of selecting high-minded men for their school commissioners. Certainly the present board is of this type. Some of the board's methods and actions must be criticized; but the errors to be pointed out are errors of judgment and not of character or effort.

Minutes of the board show that the superintendent of schools is not consulted nor asked to nominate teachers; until recently the principals were not consulted on appointments; nothing more clearly shows the primitive character of educational administration in Wheeling.

### LACK OF COMMUNITY INTEREST AND SUPPORT A SERIOUS HANDICAP.

The community generally has been indifferent toward public school matters; active public cooperation and moral support have been largely lacking. Inactive members of the community who have made no effort to promote good schools have scarcely earned a right to criticize.

### MANY COMMENDABLE FEATURES IN SPITE OF UNFAVORABLE CONDITIONS.

In spite of unfavorable conditions, including lack of vigorous community support, unwieldy size of board, inefficient scheme of organization, and the like, numerous commendable features have been introduced by the board. Some of these are:

- (1) Medical inspection or health service.
- (2) Numerous special supervisors and special teachers.
- (3) Free textbooks.
- (4) Development of the public library.

- (5) Recent large increases in salaries.
- (6) Recent expansion of the budget.
- (7) Setting standard qualifications for high-school teachers.
- (8) An unusually extensive series of courses for vocational, industrial, commercial, and home-making training.
- (9) Recent attempts to extend the benefits of physical training.
- (10) The tendency to defray the expenses of members of the supervisory corps in attendance at professional meetings.
- (11) Provision of visiting days for teachers.
- (12) A not ungenerous sick-leave allowance.
- (13) Provision of a "coach" teacher for each building (although the plan is not administered effectively).
- (14) An unusually good system of providing substitute teachers (incomplete, but excellent so far as it goes).
- (15) Numerous sets of supplementary readers, and a system for circulating them (in serious need of attention, but a highly commendable start).
- (16) A teachers' pension system.
- (17) Evening schools.
- (18) Americanization classes.

#### DIFFICULTIES OF ADMINISTRATION THROUGH COMMITTEES.

The board has an unusually large number of standing committees—ten—each of which performs important functions properly belonging to the board itself. Four of these committees are each as large as the entire school board of New York City; and the smaller committees are each the size of the entire school board in Albany or Troy.

Adding these 10 functional boards to the seven local or subdistrict boards, and the composite board in which they all belong, one may realize something of the complexity of the organization and the possibilities for scattering responsibility.

For example, the committee on buildings and grounds acts chiefly as individuals, ordering repairs, painting, etc., without consultation, and without previous action by the board. The committee meets, confirms the acts of individual members, and then requests confirmation by the board. From the way in which reports are presented, the board can have no real knowledge of what is done; confirmation is practically invariable, and without debate.

In view of the amount of work to be done, members of the committee can not give the amount of time necessary to know all the details and needs of all the buildings. Each member knows many things about "his" building, it is true, but there is nothing approaching that specialized understanding of buildings, grounds, and equipment in relation to education that is needed for the efficient and economical administration of a modern school system. Further, they themselves sit among the judges of their own acts.

Evidence of a certain degree of irresponsibility is found in the use of business practices universally condemned, and generally forbidden by law; such as entering into contractual business relations with individual members of the board, and executive action by individual board members prior to directing action by the board.

The results of this system of lay administration may be seen in the actual building situation in Wheeling. Even old buildings can be made pleasant, light, airy, sanitary, and reasonably safe; but this has not been done. There is little evidence of careful planning, standardized procedure, settled policies, a forward-looking building program.

The board's task is not to *do* the work, but to *get it done*; first, by directing, and then by inspecting, so as to be sure the work is efficient and economical.

The committee on buildings and grounds is active and conscientious, and appears to give an unusually large amount of time and attention to executive labors. It is not a question of honesty, or integrity, but of incorrect organization and procedure for securing results.



**IMPOSSIBLE FOR LAYMEN EFFECTIVELY TO EXAMINE AND SELECT TEACHERS.**

The activities of the committee on teachers and schools afford other examples of the difficulties involved in the attempt to perform expert executive functions through committees or individual members of the board. Without professional training and extended experience, it is not possible to judge efficiently the relative merits of candidates for principalship and teaching positions. In actual practice, the scheme has worked badly, omitting entirely any provision for rating the efficiency of principals and teachers, and means for eliminating the inefficient; another serious omission is that of a rule requiring consultation with superintendent and principals in choosing teachers. No provision has been made for recognizing superior merit or professional advancement by increases in salary or otherwise.

The alternative plan is to leave executive labors to professional executives. The superintendent alone, in consultation with principals and supervisors, can know how many teachers are needed, and the special abilities needed for each type of position. This plan places responsibility where it belongs; relieves the board of unnecessary labors; gives the superintendent authority over his teachers, which he can not have so long as they owe their positions to others; permits the board to hold the superintendent responsible for results—a thing impossible now.

**WORK OF OTHER COMMITTEES DISCUSSED.**

The report discusses in detail the activities of all the standing committees of the board, and shows clearly what functions properly belong to the board and what duties should be performed by executive officers under the direction of the board. It is impossible in this brief digest to devote space to each.

**LACK OF AN EXECUTIVE HEAD A SERIOUS DEFECT.**

To summarize the situation, perhaps rather bluntly, the fundamental weakness in the public school system in Wheeling has been executive management by laymen. There are many analogies between the management of a school system by a board of education and the management of a business or a factory by a board of directors; but the fundamental principles of organization and management generally accepted in business and industry, and in progressive school systems, have not been operative in the Wheeling schools.

The board of directors of a business or manufacturing corporation does not mix in the details of the work. It employs a chief executive, outlines its policies to him, makes clear to him the results to be secured, gives him control over the means to be employed, and then demands that he get results. They then employ various methods of accounting, auditing, and otherwise checking up the results.

In the Wheeling schools, however, the executive work of the board is mainly performed by committees, or even by individual members, who buy and sell, employ and discharge, enter into and abrogate contracts, direct employees, and attend to countless details usually left to executives and their subordinates. In the sense in which the term is used in the business world, the board has no chief executive, and there is little evidence in the plan of organization to show any realization of the need of one.

Let the business man on the board imagine what would happen to his bank, or store, or factory, if it were managed by a committee of outsiders who dipped into the business for, say, two hours each week. The conduct of a big school system is a more complex, difficult, and technical job than merchandising or banking.

What is needed is the adoption of a plan by which the board will get things done in responsible ways, and enforce responsibility, without doing the things themselves.

The board should occupy itself mainly with directorial and inspectorial functions, leaving detailed executive labors to their specialized and experienced executive officials—the superintendent of schools and his subordinates.

#### FUNDAMENTAL NEEDS IN WHEELING.

Briefly stated, some of the things which need to be done are:

- (1) Eliminate the subdistricts, except for attendance purposes.
- (2) Eliminate the local commissionerships, and have board members elected at large.
- (3) Provide a small board of men and women who will be beyond the reach of local, petty, personal, and political influences.
- (4) The board should delegate responsibility and authority to its chief executive, provide the necessary means, demand results, and then stand aside and let the superintendent and his organization get results.
- (5) The board should adopt impersonal ways of checking up results, efficiency, and economy.
- (6) The board should take the community into its confidence fully, at all times, and keep the public informed as to policies, needs, and results.

#### NEW LEGISLATION ESSENTIAL.

The laws governing the independent school district of Wheeling are in a confused, fragmentary, and archaic condition. The complete charter legislation which governs the district is not in the possession of the board, nor any of its officers, nor of the public library which is under the control of the board.

The school laws applicable to Wheeling should be completely rewritten on the basis of the best modern practice. The report contains detailed suggestions concerning those matters which should be included in State legislatures, and also those which should be cared for by rules and regulations or other local legislation by the board.

## II. THE LEGISLATIVE PROGRAM.

There is a commendable tendency in progressive States to eliminate special charter legislation for independent city school districts. When the State drafts a good general law for the purpose, it saves a city a good deal of special maneuvering simply to come in under it.

If Wheeling does not choose to follow this course, it is recommended that, in rewriting the charter, the general State legislation be accepted so far as it is suited to conditions in Wheeling, and that special legislation be sought only in so far as the general legislation is not suitable.

#### NECESSARY DISTINCTION BETWEEN STATE LEGISLATION AND THE RULES AND REGULATIONS OF THE BOARD.

Only the more general and fundamental things should be accomplished by State legislation. Matters of detail should be left to the by-laws, rules and regulations, and other legislation by the board.

In the following summary of the things to be taken care of in the proposed reorganization of the affairs of the independent school district of Wheeling, those matters which are usually best taken care of by *State legislation* are designated by the letter (S); and those which are best included under the *rules and regulations* or other legislation of the board are designated by the letter (R)

## SUMMARY OF POINTS TO BE COVERED.

- (1) The subdistrict divisions should be abolished, except for attendance purposes. (S)
- (2) There should be a school board of five members, elected at large, one member being elected each year, for a term of five years. (If elections must be biennial, then the term should be six years, one-third of the board, as nearly as may be, being elected at each election.) (S)
- (3) It is desirable, though not so essential, that members be nominated by petition and elected on nonpartisan ballot, at special school elections, held in the school buildings, and directed by the board of education. (S)
- (4) Board members should be citizens of the United States, and residents of the city for at least three years immediately preceding election. (S)
- (5) No salary or other remuneration should be paid to board members. This does not preclude the payment of traveling and other necessary expenses involved in the conduct of the board's business. (S)
- (6) When a vacancy occurs other than by expiration of term of office, it should be filled by the mayor (subject to confirmation by the council) until the next school election, when it should be filled by election for the unexpired portion of the term. (S)
- (7) A specific day and hour should be fixed for the first meeting of the board subsequent to the annual election, at which time the board is organized for the year. (S)
- (8) A specific day and hour should be fixed for the regular monthly board meetings, and a method prescribed for calling special meetings. (R)
- (9) The board should have no standing committees except the committee of the whole. (R)
- (10) When tasks arise demanding committee work, the board should appoint temporary special committees. (R)
- (11) The superintendent of education should be made the chief executive of the board of education in its administration of all aspects of the school system. (S)
- (12) The board should appoint the superintendent for a relatively long term of three or four years, subject to removal only for cause by a four-fifths vote of the board. (S)
- (13) In Wheeling the board should create (if not already created) and provide for the following positions subordinate to the chief executive: (1) Business assistant (who also should be clerk of the board); (2) manager of properties (or director of buildings and grounds), subordinate to the business assistant; (3) director of census and attendance; (4) director of health (including both medical inspection and physical education); (5) primary supervisor. Beyond these, the present provision of special supervisors, principals, teachers, nurses, etc., appears to be good. (R) (By-laws.)
- (14) Outside of the major executive organization the board should provide for and appoint for only part-time or occasional duties an attorney, a treasurer, and an auditor. (R) (By-laws.)

## POWERS AND DUTIES OF THE BOARD.

- (15) The board should possess corporate powers: The power to acquire, hold, lease, and sell real and personal property; to receive bequests and donations; to sue and be sued; to condemn property needed for educational purposes; and to perform other corporate acts required for the management and control of the schools and other agencies committed to its care. (S)
- (16) The powers and duties of the board of education should be:
  - (a) To determine all questions of general policy to be employed in the conduct of education. (S)
  - (b) To create, abolish, modify, and maintain such positions, schools, divisions, classifications, etc., as may be necessary for the efficient administration of the work. (S)

- (c) To have the care, custody, title, control, and safekeeping of all school property or other property of the city used for educational, social, or recreational activities and not specifically placed by law under the control of some other body or officer, and to prescribe rules and regulations for the use and preservation of such property. (S)
- (d) To purchase new school sites or additions to sites, and to order new buildings or additions to buildings erected, as the needs of the schools and other educational, social, and recreational agencies under their control may necessitate; and to approve all contracts entered into. (S)
- (e) To rent or lease property required for the use of schools or other agencies maintained and directed by the board. (S)
- (f) To establish and maintain such free elementary schools, intermediate schools, high schools, kindergartens, vocational and industrial schools, technical schools, night schools, part-time or continuation schools and classes, vacation schools, open-air schools, schools for adults, schools for delinquents, schools for mentally and physically defective children, or such other schools or classes as the board shall deem necessary to meet the needs and demands of the city. (S)
- (g) To establish and maintain libraries and museums which may be open to the public, to organize and maintain public lecture courses, and to establish, equip, and maintain play grounds, recreation centers, social centers, and reading rooms. (S)
- (h) To authorize the formulation of the annual budget of expenditures for the schools, public library, and other agencies maintained by the board, and to pass upon and adopt such budget as the work appears to necessitate. (S)
- (i) To fix the annual tax levy for education. (S)
- (j) To fix the salaries of all officers and employees. (S)
- (k) To approve all expenditures made. (S)
- (l) To approve all contracts entered into. (S)
- (m) To authorize the formulation of the by-laws, rules, and regulations needed for the direction and management of the schools and other agencies and activities under the board, and to approve such by-laws, rules, and regulations before they become operative. (S)
- (n) To authorize the courses of study which shall be given in the schools or by other educational agencies directed and maintained by the board, and to approve the content of such courses before they become operative. (S)
- (o) To authorize the selection and determination of such books, maps, globes, apparatus, furniture, tools, and other equipment and supplies as may be necessary for the proper and efficient management of the schools and other educational, social, and recreational agencies and activities under its management and control, and to approve such selections and determinations before purchases are made. (S)
- (p) To authorize the purchase and provision of such books, maps, globes, apparatus, furniture, tools, and other equipment and supplies as may be necessary for the proper and efficient management of the schools and other educational, social, and recreational agencies and activities under its management and control, and to approve prices and other conditions of purchase, before such purchases are made. (S)
- (q) To select and employ a superintendent of education, who shall be the chief executive of the board. (S)
- (r) To authorize the determination of the number and qualifications of employees to be provided for the work of the several schools and agencies, and to approve such determinations before employees are selected. (S)
- (s) To authorize the establishment of an efficient system of certification of teachers, and the preparation of eligible lists. (S)
- (t) To require the superintendent to nominate all assistants, directors, and supervisors of special departments, principals, teachers, physicians, nurses, janitors, and other officers and employees in the organization under his charge; the board to pass upon and approve all nominations before appointments are made, and to make all appointments and approve all contracts. (S)
- (u) To authorize the determination of plans for attendance, census, classification, grading, promotion, transfers, graduation from schools and courses, and other matters involved in the management and control of the pupils and students, and to approve all such plans before they become operative. (S)
- (v) To authorize the determination of plans for testing, recording and reporting the degrees of proficiency attained by the pupils in the several classes, grades, and schools; approve such plans before they are put into operation; and to provide the means necessary for making the plans operative. (S)
- (w) To authorize the preparation and publication periodically of reports to the community which set forth in a clear and intelligible manner the character of the efforts, degrees of achievement, working conditions, finance, and further needs of the

schools and other agencies maintained and directed by the board; to approve such reports before they are published; and to direct their publication and distribution. (S)

(x) To require their officials to make such reports of the educational and other activities under their charge as may be legitimately requested by county, State, or national authority. (S)

(y) To perform any duty imposed upon boards of education by the laws or administrative regulations of the State so far as they may be applicable to the schools or other educational agencies and affairs of the district and not inconsistent with other legislation affecting the district. (S)

(z) To prescribe such by-laws, rules, and regulations as may be necessary to make the State legislation effective, and for the conduct of the proceedings of the board, and for transacting all the affairs of the board that relate to the management, operation, control, maintenance, and discipline of the schools, public library, and all other educational, social, and recreational agencies and activities under its charge or direction. (S)

(aa) To perform such other duties and to possess such other powers as may be required to administer the affairs placed under its control and management, to execute all powers vested in it, and to promote the best interests of the schools and other agencies and activities committed to its care. (S)

#### POWERS AND DUTIES OF THE SUPERINTENDENT.

(17) The superintendent of schools should possess the following powers and be charged with the following duties:

(a) To serve as the chief executive officer of the board in its conduct of the schools and of other agencies and activities committed to its care. (S)

(b) To attend all regular and special meetings of the board, and to cooperate and advise with all committees of the board. (S)

(c) To exercise the right to speak on all matters before the board, but not to vote. (S)

(d) To enforce all provisions of law and all rules and regulations relating to the management of the schools and other educational, social, and recreational agencies and activities under the direction of the board of education. (S)

(e) To prepare and submit to the board for approval by-laws, rules, and regulations needed for the direction and control of the schools and other agencies and activities under the charge of the board. (S)

(f) To prepare, in conference and cooperation with the directors and supervisors of special departments, principals, teachers, librarians, and other competent members of the organization, the content of each course of study authorized by the board of education. (S)

(g) To select, in conference and cooperation with the directors and supervisors of special departments, principals, teachers, librarians, physicians and nurses the text-books and other books, apparatus, maps, charts, tools, equipment, and all other supplies and appliances needed for the activities of the schools and other agencies under the care of the board. (S)

(h) To determine the boundaries of school attendance subdistricts, subject to the approval of the board. (S)

(i) To investigate the need of and recommend to the board provision for school facilities in the several subdistricts. (S)

(j) To have charge of the operation and maintenance of the buildings and equipment of the schools and other agencies under the board, the maintenance of grounds, and the purchase, storage, and distribution of books, maps, charts, apparatus, tools, and all other equipment, materials, and supplies. (S)

(k) To have charge of the system of certification of all teachers and other employees, except as otherwise provided for by law, and to prepare, as occasion demands, eligible lists for all types of positions. (S)

(l) To nominate as needed the assistants, directors and supervisors of special departments, principals, teachers, physicians, nurses, librarians, janitors, clerks, stenographers, and other employees, authorized by the board. (S)

(m) To recommend, subject to the approval of the board, the salary to be paid each official or employee of the board. (S)

(n) To have supervision and direction of assistants directors, and supervisors of special departments, principals, teachers, librarians, physicians, nurses, attendance officers, janitors, and other persons employed in the conduct of the schools and other agencies under the board. (S)

(o) To assign principals, nurses, janitors, librarians, and other employees to the schools or other place where their work is to be done; to transfer them from one school

or other place of work to another; and to report immediately such transfers to the board for consideration and action. (S)

(p) To assign teachers to schools, grades, classes, and courses according to the needs of the service; to transfer teachers from one school to another, from one grade to another, from one class to another, according to the needs of the service; and to report immediately such assignments and transfers to the board for its consideration and action. (S)

(q) To report to the board violations of regulations and cases of insubordination; and in cases sufficiently grave to warrant it, suspend any official or employee under the direction of the superintendent until the next regular meeting of the board when all the facts relating to the case shall be submitted to the board for its consideration and action. (S)

(r) To recommend for discharge or retirement any employee under his direction whose influence or services are so unsatisfactory as to warrant such action, subject to the approval of the board. (S)

(s) To prepare, in conference with the business assistant and others in possession of the necessary facts, an annual budget, showing in detail the appropriations necessary to meet the estimated needs of the ensuing school year, and submit the same to the board for consideration and action. (S)

(t) To recommend to the board transfers from one budgetary appropriation to another as conditions may require. (S)

(u) To have power, within the limits of the detailed budget approved by the board, to approve and direct all purchases and expenditures, making report to the board at each monthly meeting, and at any other time when the board may request it; to report proposed detailed expenditures prior to action, whenever the board may request the same, for its consideration and action. (S)

(v) To have supervision and direction over all activities involved in the census, the enforcement of the attendance laws, the classification, grading, promotion, discipline, and the organization and management in general of the pupils and students.

(w) To have supervision and direction over courses of study, methods of educational procedure, the working conditions of pupils and teachers, standards of achievement, the supervisory labors of special supervisors, principals, and departmental heads, the training of teachers in service, the measurement of educational achievements, and every other professional factor, agency, or activity involved in the efficient conduct of education. (S)

(x) To make decisions in the case of controversies or conflicts arising in the administrative organization of which he is the head, subject to appeal to the board. (S)

(y) To decide all matters of detail purely ministerial and administrative in the application of laws, by-laws, rules, and regulations to the concrete situations that are met with; and to decide any matters that may arise concerning which no specific provision is made in the legislation, reporting his decisions at the next regular meeting of the board following such decisions. (S)

#### THE BUSINESS ASSISTANT AND CLERK OF THE BOARD.

(18) The business assistant to the superintendent and clerk of the board, before entering upon the duties of his office, should execute a bond in such sum as directed by the board, conditioned upon the faithful discharge of his official duties, and delivery to his successor of all district property pertaining to his office or in his custody.

(19) The business assistant, under the supervision and direction of the superintendent, should perform the following duties:

(a) Act as purchasing agent, receive, store, and distribute the books, supplies, apparatus, and other materials and appliances authorized by the board. (R)

(b) Represent the board in negotiations relating to the construction, repair, and maintenance of school property. (R)

(c) Recommend to the board through the superintendent such assistants, clerks, janitors, engineers, foremen, and mechanics as shall be needed for continuous employ in the department under his charge; and have authority to employ for brief periods such workmen as are necessary for the execution of the labors of his department, and to discharge the same. (R)

(d) Supervise all matters of repair, and have general charge of all buildings under the charge of the board. (R)

(e) Make and keep accurate and reliable real and personal property records which shall show the cost, time of purchase or acquisition, present value, and location of the property. (R)

(f) Cause the property of the board to be insured in such amounts as the board may from time to time direct, and keep a record of insurance placed on school property. (R)

(g) Make to the board through the superintendent written monthly report of the condition of the buildings and other property of the board, as to repairs, construction, and improvements, including such requests of principals as require action of the board, with recommendations thereon. (R)

(h) Draw up or examine all contracts and other engagements in which the board is a party. (R)

(i) Receive tuition fees, fines, money from the sale of books, shop construction, and other school property and services, from other buildings, and from other sources, except such as are paid to the treasurer of the board according to law, and deposit all moneys collected by him with the district treasurer at least once each month. (R)

(j) Audit all claims, approve all bills, and submit the same to the auditor of the board for audit and approval. (R)

(k) Audit all cash collections made by the agents of the board, and determine the kind of form of reports to be required of such collecting agents. (R)

(l) Keep the revenue and expense accounts, asset and liability accounts, budget allowance ledger, registers of purchase orders, vouchers and warrants, expenditure distribution record by schools, pay-roll records, registers of leases: rents, bonds, and building construction, and other contracts. (R)

(m) Draw all warrants in payments of claims against the board. (R)

(n) Submit to the board a monthly report of receipts, disbursements, and budget balances, and an annual report at the close of the fiscal year. (R)

(o) Act as custodian of all contracts, securities, documents, title papers, books of record, and other papers belonging to the board. (R)

(p) Have supervision and direction over the director of properties, janitors, and other continuous or temporary employees of the department under his charge. (R)

(q) Perform such other duties as may be assigned by the superintendent under the authorization of the board. (R)

(20) The business assistant, in his capacity of clerk of the board, should perform the following duties:

(a) Perform the usual functions of secretary to the board. (R)

(b) Keep the minutes of the meetings of the board, and a calendar of all matters referred to committees and others, and report action or nonaction on the same at each regular meeting. (R)

(c) Send written notices to board members of both special and regular meetings of the board, with calendar of all matters to be brought before the meeting so far as these are known at time of sending the notice. (R)

(d) Receive and reply to all communications to the board according to the directions of the board. (R)

(e) Perform such duties as are prescribed by law or by the by-laws of the board in connection with school elections of every kind. (R)

The legislation above suggested will provide for good organization and procedure upon the administrative level of the management. It is not possible here to enter into a full enumeration of all the laws, by-laws, rules, and regulations that should be enacted for the governance of the schools. The things to be provided for are very numerous and can be ascertained by an examination of the complete school code of West Virginia, or other States, together with an examination of manuals of rules and regulations of careful school boards.

#### MEETINGS OF THE BOARD.

One way of estimating the efficiency of the board is to note the regularity with which the members attend the meetings. For this purpose an examination was made of the minutes of the board, and the attendance noted during the three years from January 1, 1918, to December 31, 1920.

During this period, the board held 37 regular meetings, 9 special meetings, 1 adjourned meeting, and 7 meetings at which there was no quorum; total, 54 meetings.

Sixteen members have been connected with the board for the entire three years; of these, 1 member attended all of the 54 meetings; 1 attended 53, and 1 attended 51;

only 9 others attended more than 22 meetings. One member has attended but one meeting of the board in three years.

In 1918, when 16 meetings were held, 7 members attended only 8 meetings or less; in 1919, when 21 meetings were held, 8 members attended only 10 meetings or less; in 1920, when 17 meetings were held, 8 members attended only 8 meetings or less.

The following table shows the number of meetings held during the three years; and the number of members present at each:

TABLE 1.—Attendance of members at meetings of the board of education.

Number of members present	Number of meetings.			Three years' total.	Aggregate attendance.
	1918	1919	1920		
18.....	1			1	18
17.....		3		3	51
16.....	1	1	2	4	64
15.....	2	3	4	9	135
14.....	3	2	3	8	112
13.....	2	3	4	9	117
12.....	3	3	2	8	96
11.....	2	2	1	5	55
10.....	2	2		4	20
9.....		1	1	2	36
8.....					
7.....		1		1	7
Total.....	16	21	17	54	771
Per cent of attendance.....	61.9	61.9	64.4	62.7	

Of the 54 meetings held during the three years, 7 had fewer than 11 members present, or a quorum; at only 8 meetings were there more than 15 members present; only 1 meeting was attended by as many as 18 members. The per cent of attendance of members for the 3-year period was 62.7. In this connection, it may be noted that the board requires 75 per cent performance from the children in the schools as a condition of promotion.

#### SCHOOL CENSUS.

A school census is taken annually in Wheeling, but it does not appear that the board makes any special use of the data thus secured, for no analysis has been made of the figures. Further, the work of enumeration is very carelessly done, and the reports are quite unreliable.

For example, an analysis of the 1920 school census figures was made by the survey staff, in order to ascertain how many children were reported of each age. A comparison of these figures with the figures for enrollment in nine public elementary schools and six parochial schools shows that there are enrolled in these schools 949 more children under 14 years of age than are accounted for in the census reports. Again, an analysis of the 1915 census enumeration was made, for comparison with corresponding figures of five years later. The total number of white children reported was 10,315; of these, the ages are not given in 2,182 cases, or more than 20 per cent of all. Of 238 colored children, the ages are not reported in 118 cases, or nearly 50 per cent of all.

Such reports are practically valueless, and payment for them is a waste of public money.



TABLE 2.—Comparison of school census with school enrollment, 1920—Number of children reported of each age.

Age in years.	Census enumeration, May, 1920.	Enrolled in—		Excess.
		9 public elementary schools, September, 1920.	Parochial schools, September, 1920.	
Under 6.....	3	111	26	137
6 to 6.5.....	7	259	87	339
6.5 to 7.....	24	228	61	41
7 to 7.5.....	383	249	121	10
7.5 to 8.....	339	249	99	1
8 to 8.5.....	322	245	128	51
8.5 to 9.....	288	228	100	40
9 to 9.5.....	326	259	110	43
9.5 to 10.....	467	235	191	68
10 to 10.5.....	339	259	80	20
10.5 to 11.....	329	251	88	19
11 to 11.5.....	329	252	147	99
11.5 to 12.....	283	292	16	23
12 to 12.5.....	322	293	126	99
12.5 to 13.....	341	249	74	18
13 to 13.5.....	332	245	108	21
13.5 to 14.....	318	263	72	17
14 to 14.5.....	344	260	59	82
14.5 to 15.....	286	192	39	155
15 to 15.5.....	337	67	24	246
15.5 to 16.....	258	37	16	205
16 to 16.5.....	351	9	7	338
16.5 to 17.....	303	11	7	285
17 to 17.5.....	294	1	7	293
17.5 to 18.....	294	1	7	293
18 to 18.5.....	336	1	7	336
18.5 to 19.....	319	1	7	319
19 to 19.5.....	327	1	7	327
19.5 to 20.....	233	1	7	233
20 to 20.5.....	254	1	7	254
20.5 to 21.....	340	1	7	340
Over 21.....	459	1	7	459
Not reported.....	26	1	7	26
Total.....	9,665	4,594	1,741	4,279
				949
				3,330

School census figures should be checked up more carefully to insure accuracy and completeness, and then they should be carefully analyzed and studied with a view to placing the facts before the board. These facts should include the number of children of each age who ought to be in school; where they live; how many are actually enrolled in public, private, or parochial schools; how many are working at gainful employment; other reasons for nonattendance at school.

Progressive communities are now supplementing the formal census enumeration by providing for cumulative record cards, to be made and kept up to date by the attendance department. The card contains information concerning residence, names and birth places of parents, date of birth of child, sex, nationality, kind and grade of school attendance or reason for nonattendance; name and address of employer and nature of employment if employed, etc. If such cards are kept up to date by the addition of names of children moving into the community the essential facts about every child of school age can be available at all times.

Early in each school term the census reports should be checked against the enrollment in the public, private, and parochial schools to ascertain what children are out of school. The attendance officers can then visit the homes of these children and follow them up. Census information, when properly digested and utilized, will thus function more completely in the administration of compulsory school attendance,

child labor legislation, and the granting of work permits. It will also prove valuable in studying the growth of the community and the shifting of population, and thus assist in planning school accommodations for the future.

### III. FINANCES AND ACCOUNTING.

#### COMPARISON OF CITY SCHOOL EXPENDITURES WITH THOSE OF CITY DEPARTMENTS.

(a) City government enjoys the advantage of having the various city revenues to meet part of city expenses; whereas the schools must levy a tax for almost their entire expenditures. Therefore the tax rates of city and schools are not comparable, nor are they comparable with tax rates of other cities not organized in like manner.

(b) Comparison between city departments and schools should be made only on basis of expenditures. Of the total amount expended by both city and schools from 1917-18 to date the schools alone have expended but 35 per cent; schools and library together, 36½ per cent.

(c) School costs in Wheeling have doubled since 1915, but this is true also of schools throughout the country. Increase in teachers' salaries and increase in other costs, together with additional school activities, are responsible for increase in 1920 school tax.

(d) Other public expenditures in Wheeling have increased in even greater proportion than the schools. Since 1917 the expense of the city council has increased 224 per cent; bureau of streets, 141 per cent; bureau of fire, 112 per cent; bureau of police, 98 per cent; bond principal and interest, 95 per cent; bureau of health, 57 per cent; whereas the school expenditures have increased but 55 per cent. (See Table 1.)

TABLE 3.--Joint statement of city department, public school, and library expenditures for 1917-18, 1918-19, 1919-20, 1920-21, and estimated expenditures for 1921-22, Wheeling, W. Va.

Departments and activities.	1917-18		1918-19		1919-20		1920-21		Total	
	Amounts.	Percent.	Amounts.	Percent.	Amounts.	Percent.	Amounts.	Percent.	Amounts.	Percent.
Read principal and interest.....	\$4,220.06	9.2	\$99,410.60	9.7	\$64,906.00	7.2	\$163,526.95	10.8	\$432,344.51	9.4
City council and clerks.....	3,354.66	6.6	13,743.45	1.3	10,226.31	1.9	11,263.00	1.1	46,671.82	1.0
City manager and staff.....	15,327.65	31.7	134,262.97	13.2	17,677.93	4.1	33,532.36	3.6	187,397.01	4.0
Waterworks.....	151,972.64	312.7	1,000,000.00	97.2	170,000.00	18.4	131,336.46	12.8	497,329.11	10.7
Bureau of fire.....	81,176.34	168.4	74,637.66	7.2	94,117.33	8.0	141,132.32	12.8	383,063.66	8.3
Bureau of police.....	63,619.30	132.1	74,087.00	7.2	59,930.74	4.8	114,276.19	7.4	263,092.83	5.7
Bureau of streets.....	46,296.17	96.0	47,236.21	4.6	22,707.59	1.9	53,633.93	2.3	128,874.90	2.8
Electric light works.....	39,111.85	81.0	31,413.66	3.0	22,707.59	1.9	53,633.93	2.3	128,874.90	2.8
Bureau of health.....	37,145.04	77.0	50,151.16	4.9	39,318.71	3.3	58,461.00	3.4	185,014.91	4.0
Markets.....	2,864.80	6.0	3,362.68	3.3	2,954.63	3.3	3,150.00	1.1	12,362.11	2.7
Wharves.....	371.25	0.8	402.20	0.4	400.33	0.4	410.00	0.2	1,584.78	0.3
City's share in cost of special improvements.....	5,416.92	11.3	54,213.43	5.3	54,213.43	4.6	30,000.00	2.0	89,640.35	1.9
Miscellaneous.....	34,718.96	72.0	78,058.78	7.6	41,733.95	3.3	50,981.90	3.3	204,511.60	4.4
Total of city departments.....	564,478.77	115.4	668,897.56	64.8	741,874.22	63.0	988,363.83	64.8	2,963,206.38	63.8
Library.....	17,199.42	35.5	12,340.79	1.2	12,040.58	1.0	12,540.00	1.0	54,160.79	1.2
Total of city departments and library.....	581,678.19	120.9	681,238.35	66.0	753,914.80	64.0	1,000,903.83	65.8	3,017,367.17	65.0
Public schools (independent school district).....	337,841.23	70.0	348,888.44	34.0	421,227.89	36.0	523,239.64	34.1	1,631,204.71	35.0
Grand total.....	919,519.42	190.9	1,029,774.79	100.0	1,175,142.69	100.0	1,524,143.47	100.0	4,648,571.88	100.0

1 Estimated; amount taken from budget estimates.  
 2 Street paving, sewers, etc.  
 3 Arbitrary estimate, as this item does not appear in the budget; the estimate is probably lower than the actual amount.



(e) City of Wheeling includes more taxable property than the independent school district; therefore city can raise as much money by a smaller tax rate as the schools can by a larger tax rate.

(f) Comparison between tax rates of 1919 and 1920 show school tax rate to have increased 51 per cent, and city tax (based on equal amount of taxable property to have increased 50 per cent.

(g) Conclusion to be drawn from the above is that school tax of 86 cents in 1920 is logical and in line with what other cities are doing for their schools.

#### COMPARISON OF WHEELING SCHOOL EXPENDITURES WITH THOSE OF OTHER CITIES.

(a) The taxable wealth in the independent school district of Wheeling for 1920 is \$65,401,955.<sup>1</sup> But a study of school taxation by 45 cities of 30,000 to 100,000 population in 1917-18 reveals the fact that Wheeling was considered as not assessing property on a 100 per cent valuation, and if so taxed its taxable wealth in 1917 would be \$93,531,000 instead of \$62,893,115 as given.

(b) In comparison with the same 45 cities, Wheeling ranks 33 as to total school expenses (excluding additions and improvements); it ranks 38 in expenses for general control; 32 in instruction cost (day school); 34 in cost of plant operation; 29 as to expenses for auxiliary agencies; and 26 fixed charges and interest.

(c) Wheeling's cost in 1919-20 per pupil average daily attendance as to total school expenses is \$76.69; for general control, \$3.16; for instruction (day school), \$51.13; operation of plant, \$7.31; upkeep, \$7.16; auxiliary agencies, \$2.26; fixed charges and interest, \$2.61.

#### THE ACCOUNTS OF THE WHEELING PUBLIC SCHOOLS.

(a) The public schools of Wheeling unfortunately, like numerous other school systems of the country, maintain no accounting system in the technical sense of the word. By this is meant a double-entry set of books from which balance sheets, operating, and other analytical statements may be currently drawn.

(b) The school accounts of Wheeling consist of a voluminous record of receipts and disbursements, a portion of which is duplication, with but little separation as to character of expenditure, and mixed up as to distribution of functional costs. There appears to be a misunderstanding as to which funds are the proper ones to make certain charges against and have the charges legal. Instances exist where abatements of expenditures are shown as revenues, and also the opposite, where abatements of revenues are shown as expenditures. Expenditures pertaining to different school years are not clearly segregated. Expenditures, such as repairs and improvements, are grouped together, although one is expense and the other investment.

(c) The annual financial statements of the schools are to be criticized as masses of undigested data, giving little information to the public, and of practically no value for administrative review.

(d) The method of filing is antiquated and the filing apparatus obsolete.

(e) As for the stores records, it would be unfair to say that there are none, inasmuch as memoranda totals of quantities are occasionally made; but, nevertheless, the requisitions on which books and supplies are delivered from the storeroom are not priced nor extended and are therefore not recorded in any financially usable form.

(f) The schools are doing a business of from \$300,000 to \$400,000 (in 1919-20 it reached \$500,000; in 1920-21, \$619,425.36), but the accounting staff consists of one man who acts as clerk of the board, bookkeeper, cashier, paymaster, filing clerk, purchasing agent, and storekeeper. The only assistance he has is a portion of the services of a stenographer, who acts also in like capacity for the superintendent of schools.

<sup>1</sup>Including public utilities, \$72,026,205.

(g) Inquiry develops the fact that it has not been the policy of the board to authorize, or the clerk to request, attendance by him at annual conventions of school accountants where modern and advanced methods of school accounting are reviewed and discussed.

**Dissection of School Accounts and Preparation of Balance Sheet, Operating and Other Financial Statements.**

(a) The total value of school property in Wheeling, after deducting depreciation, is \$1,071,451.13. While it would cost twice this amount to replace it, this is the amount it approximately represents in modern educational values.

(b) In 1919-20 the schools expended \$421,227.38, of which \$376,427.47 (89.6 per cent) was for expense (salaries, supplies, and repairs), and \$44,799.91 (10.6 per cent) was for investment (additions and improvements).

(c) The total revenues were \$426,000.97, of which \$37,881.10 went to the school fund and \$88,516.87 to the building fund.

(d) The following show conditions as of June 30, 1920, and indicate the forms in which it is suggested that the several accounts be kept

**INDEPENDENT SCHOOL DISTRICT OF WHEELING, W. VA.**

**Balance Sheet (All Funds Together).**

ASSETS.		LIABILITIES.	
Land.....	\$315,191.66	Bonds outstanding.....	\$120,000.00
Instructional building.....	609,652.47	Accounts payable.....	46,138.00
Instructional equipment.....	77,700.00	Surplus.....	56,812.60
Janitors' residences.....	28,000.00		
Instructional supplies.....	15,000.00		
Insurance (prepaid).....	1,500.00		
Taxes receivable (delinquent) from current and prior years.....	15,000.00	Investment of school corporation.....	910,315.23
Cash.....	51,312.49		
	<u>1,133,396.62</u>		<u>1,133,396.62</u>

**Operation Statement (School Fund).**

Expenses pertaining to 1918-19.....	\$44,021.86	School fund revenues.....	\$337,884.10
Expenses pertaining to 1919-20.....	371,465.61	Excess of expenses over operation revenues.....	37,543.37
	<u>375,427.47</u>		<u>375,427.47</u>

**Capital Account Statement (Building Fund).**

Investment pertaining to 1918-19.....	\$41,000.00	Building fund revenues.....	\$88,516.87
Investment pertaining to 1919-20.....	44,799.91		
Excess of revenues over investment.....	42,716.96		
	<u>\$88,516.87</u>		<u>\$88,516.87</u>

\* Estimated.

\* Deficit in school fund June 30, 1920.

\* These two items make a total of \$5,021.86; the school fund deficit on June 30, 1919.

\* Available for school operation, upkeep, and miscellaneous expenses.

\* Available only for additions and improvements.

TABLE 4.—Statement of property of the independent school district of Wheeling, as of June 30, 1920.

Items.	Total.	Land (original cost).	Instructional buildings.		
			Type of construc- tion.	Date.	Cost.
Total.....	\$107, 145, 413	\$31, 510, 166			\$65, 065, 247
Elementary schools.....	720, 383	123, 000			527, 693
Washington.....	52, 000	10, 000	Brick.....	1887	36, 000
Clay.....	52, 000	10, 000	do.....	1862	36, 000
Jefferson.....	46, 500	8, 000	do.....	1897	33, 000
Union.....	97, 000	15, 000	do.....	1908	73, 000
Center.....	51, 613	10, 000	do.....	1880	35, 413
Webster.....	84, 000	5, 000	do.....	1883	73, 000
Madison:					
Old building.....	212, 280	25, 000	do.....	1918	97, 514
New building.....		25, 000	do.....	1921	52, 066
Ritcher.....	61, 000	10, 000	do.....	1872	42, 000
McKinley.....	34, 500	5, 000	do.....	1887	25, 000
Lincoln <sup>2</sup> .....	29, 500	( <sup>1</sup> )	do.....	1893	25, 000
Secondary schools.....	30, 895, 947	150, 000			12, 295, 947
High school—main building.....	28, 295, 947	140, 000	Brick.....	1915	11, 095, 947
Home economics building.....	26, 000	10, 000	do.....	( <sup>2</sup> )	12, 000
Athletic field.....	4, 210, 166	4, 210, 166		( <sup>2</sup> )	

Items.	Instruc- tional equipment (cost).	Janitors' residences.		
		Type of construc- tion.	Date.	Cost.
Total.....	\$77, 700			\$28, 000
Elementary schools.....	41, 700			28, 000
Washington.....	3, 000	Frame.....	1887	3, 000
Clay.....	3, 000	Brick.....	1874	3, 000
Jefferson.....	2, 000	do.....	1897	3, 500
Union.....	5, 000	do.....	1884	4, 000
Center.....	3, 000	do.....	1882	3, 500
Webster.....	6, 000	( <sup>1</sup> )		
Madison:				
Old building.....	5, 500	Frame.....	1889	4, 000
New building.....	3, 200			
Ritcher.....	6, 000	do.....	1890	3, 000
McKinley.....	2, 000	( <sup>2</sup> )		2, 500
Lincoln <sup>2</sup> .....	3, 000	Frame.....	1885	1, 500
Secondary schools.....	36, 000			
High school—main building.....	32, 000	( <sup>1</sup> )		
Home economics building.....	4, 000			
Athletic field.....				

<sup>1</sup> Janitor has his residence within the school building.

<sup>2</sup> Date of construction not obtained.

<sup>3</sup> Lincoln School is a school for colored children and has both elementary and high-school grades.

<sup>4</sup> The grounds of the Lincoln School are a part of the city commons, and therefore title to the land is not vested in the board of education.

TABLE 5.—Statement of 1919-20 expenditures by character and function, as of June 30, 1920.

	Amount.	Per cent.
Total expenditures.....	\$421,227.38	100.0
Expense.....	376,427.47	89.4
Financing <sup>1</sup> .....	12,829.01	3.0
Direction and control.....	9,525.82	2.3
Teaching supervision.....	5,820.80	1.4
Instructional service.....	266,970.91	63.4
Operation of buildings and grounds.....	35,587.74	8.5
Upkeep of buildings, grounds, and equipment.....	31,736.45	8.2
Auxiliary agencies and other activities.....	10,856.74	2.6
Investment.....	44,799.91	10.6
Additions and improvements.....	34,799.91	8.2
Bond payments.....	10,000.00	2.4

<sup>1</sup> Interest on bonds, interest on bank overdrafts, commission to city collector on collections, and fidelity insurance.

TABLE 6.—Statement of revenues for 1919-20.

Items.	School fund.	Building fund.	Total.
Total.....	\$337,884.10	\$88,516.87	\$426,400.97
Cash balance, July 1, 1919.....		33,031.51	33,031.51
Federal aid (Smith-Hughes fund).....	1,074.25		1,074.25
State funds <sup>1</sup> .....	34,379.51	5,449.31	39,828.82
Local taxes:			
In 1919-20.....	292,462.74	48,483.12	340,945.86
Delinquent from prior years.....	4,734.95	752.42	5,487.37
Tuition fees.....	1,384.46		1,384.46
Sales of material and supplies.....	1,679.38		1,679.38
Depository interest.....	1,741.09	472.70	2,213.79
Miscellaneous revenues.....	423.72	327.81	751.53

<sup>1</sup> Not funds in the nature of State aid, but funds representing a tax on corporations and penalties upon estates of deceased, collected by the State in Wheeling and so returnable to the locality.

TABLE 7.—Consolidated balance sheet as of June 30, 1920 (all funds).

ASSETS.		LIABILITIES.	
Fixed property:		Funded debt:	
Land.....	\$315,101.66	Bonds outstanding.....	\$120,000.00
Instructional buildings.....	650,652.47	Capital investment.....	961,454.13
Instructional equipment.....	77,700.00		
Janitors' residences.....	28,000.00		
Total.....	1,071,454.13	Total.....	1,071,454.13
Current assets:		Current liabilities:	
Stores (instructional supplies).....	\$ 5,000.00	Accounts payable.....	(*)
Insurance (prepaid and unearned).....	500.000	Surplus.....	15,673.59
Taxes receivable (delinquent).....	5,000.00		
Cash—Building fund.....	\$51,312.49		
School fund.....	46,138.90		
Total.....	15,673.59	Total.....	15,673.59
Total.....	15,673.59		
Grand total.....	1,087,127.72	Grand total.....	1,087,127.72

<sup>1</sup> Estimated on hand at end of fiscal year.

<sup>2</sup> Estimated.

<sup>3</sup> Delinquent taxes of current and prior years.

<sup>4</sup> Credit balance, representing overdraft on bank.

<sup>5</sup> Accounts payable undoubtedly existed at this time, but they were not readily obtainable from the accounts as maintained.

TABLE 8.—*Operation statement (school fund) as of June 30, 1920.*

DEBITS.		CREDITS.	
Deficit from 1918-19.....	\$4,021.86	Revenues 1919-20.....	\$337,884.10
Expenses of 1919-20.....	371,405.61	Excess of expenses over operation reve- nues.....	37,543.37
Total.....	375,427.47	Total.....	375,427.47

<sup>1</sup> This amount, with the \$1,000 payable from 1918-19 building fund, makes a total of \$5,021.86, the deficit in school fund at close of 1919-20. The payments being made in 1920-21 are arbitrarily distributed as above into expenses and investment.

<sup>2</sup> Available for operation and upkeep of schools and for miscellaneous expenses.

<sup>3</sup> The difference between the building fund surplus (\$42,716.96) and the school fund deficit (\$37,543.37) is \$5,173.59, which is the amount shown as *not* cash on the balance sheet. In these two statements the technical entries necessary to show balances to agree with bank balances (credit and overdraft) are omitted.

TABLE 9.—*Capital account statement (building fund) as of June 30, 1920.*

DEBITS.		CREDITS.	
Accounts payable from 1918-19.....	\$1,000.00	Balance from 1918-19.....	\$33,031.51
Investment for year 1919-20.....	44,799.91	Revenues from 1919-20.....	155,485.36
Excess revenues over expenditures.....	42,716.96	Total.....	88,516.87
Total.....	88,516.87	Total.....	88,516.87

<sup>1</sup> Available only for additions and improvements.

TABLE 10.—*Balance sheet as of June 30, 1920.*

ASSETS.		LIABILITIES.	
<b>Fixed property:</b>		<b>Reserves:</b>	
Land.....	\$20,063.68	Reserves for depreciation of—	
Buildings.....	36,207.73	Buildings.....	\$3,500.00
Equipment—		Equipment.....	17,250.00
Books.....	41,664.98	Capital investment.....	84,340.71
Periodicals.....	4,038.28	Total.....	105,710.09
Library furniture.....	1,609.17		
Miscellaneous.....	1,486.87		
Total.....	105,090.71		
<b>Current assets:</b>		<b>Current liabilities:</b>	
Taxes receivable (delinquent).....	150.00	Accounts payable.....	( <sup>1</sup> )
Prepaid expenses.....	150.00	Surplus.....	1,816.65
Cash.....	1,616.65	Total.....	1,816.65
Total.....	1,816.65	Grand total.....	106,907.36
Grand total.....	106,907.36		

<sup>1</sup> Estimated.

<sup>2</sup> Not easily obtainable from the accounts as maintained.

TABLE 11.—*Operation statement.*

EXPENDITURES.		REVENUES.	
Financing.....	\$164.89	Cash balance, July 1, 1919.....	\$2,541.04
Library administration and service.....	5,474.38	State (transmitted by State auditor).....	1,054.60
Building operation.....	2,422.02	Local taxes—	
Upkeep of building and equipment.....	1,161.32	1919-20.....	9,383.83
Total expenses.....	9,162.61	Delinquent from prior years.....	151.77
Investment (additions and improve- ments).....	2,917.97	Book fines.....	490.50
Total expenditures.....	12,080.58	Depository interest.....	75.40
Excess of revenues over expenditures.....	1,616.65	Total.....	13,697.23
Total.....	13,697.23	Total.....	13,697.23

<sup>1</sup> Commission to city collector on collections.

<sup>2</sup> Tax on local corporations; also penalty tax on estates of deceased.



TABLE 12.—Independent school district of Wheeling, W. Va.—Expenditures for fiscal year, 1919-20.

	Per cent.	Amount.
<b>Financing:</b>		
Commission on collections (city collector).....	1.3	\$5,704.55
Interest on bonds.....	1.3	5,625.50
Interest on bank overdrafts.....	.2	718.96
Fidelity insurance.....	.2	780.00
<b>Total.....</b>	<b>3.0</b>	<b>12,829.01</b>
<b>Direction and control:</b>		
School elections.....		
Board of education and clerk's office.....	.7	2,701.58
Legal services.....	.1	610.00
Superintendent's office.....	1.1	4,629.94
Enforcement of compulsory attendance laws.....	.4	1,445.00
Census enumeration.....		79.30
<b>Total.....</b>	<b>2.3</b>	<b>9,525.82</b>
<b>Teachingsupervision:</b>		
Industrial education.....	.3	1,405.98
Home economics.....	.3	1,180.47
Physical instruction.....	.2	641.33
Health instruction.....	.1	299.22
Music.....	.2	841.25
Drawing.....	.1	635.05
Penmanship.....	.2	817.50
<b>Total.....</b>	<b>1.4</b>	<b>5,840.80</b>
<b>Instructional service:</b>		
<b>Day school—</b>		
<b>Elementary instruction—</b>		
Undistributed.....	4.8	120,187.39
White schools.....	39.8	167,246.62
Colored schools.....	2.7	11,338.33
<b>Total.....</b>	<b>47.3</b>	<b>198,772.34</b>
<b>Secondary instruction (high school)—</b>		
Undistributed.....	3.4	14,532.27
White schools.....	10.7	45,262.63
Colored schools.....	1.0	3,939.17
<b>Total.....</b>	<b>15.1</b>	<b>63,734.07</b>
<b>Total day school.....</b>	<b>62.4</b>	<b>262,506.41</b>
<b>Night school—</b>		
Secondary instruction—white school.....	.6	2,699.50
<b>Summer school—</b>		
Secondary instruction—white school.....	.4	1,765.00
<b>Total instructional service.....</b>	<b>63.4</b>	<b>266,970.91</b>
<b>Operation of buildings and grounds:</b>		
<b>Day school—</b>		
<b>Elementary schools—</b>		
Undistributed.....	.1	555.67
White schools.....	5.8	24,422.43
Colored schools.....	.4	1,687.48
<b>Total.....</b>	<b>6.3</b>	<b>26,665.58</b>
<b>Secondary schools—</b>		
Undistributed.....		7.60
White schools.....	2.0	7,858.34
Colored schools.....	.1	599.24
<b>Total.....</b>	<b>2.1</b>	<b>8,465.28</b>
<b>Total day school.....</b>	<b>8.4</b>	<b>35,130.86</b>
<b>Night school—</b>		
Secondary school—white school.....	.06	242.74
<b>Summer school—</b>		
Secondary school—white school.....		54.14
Athletic field—undistributed.....	.04	100.00
<b>Total operation of buildings and grounds.....</b>	<b>8.5</b>	<b>35,587.74</b>

TABLE 12.—Independent school district of Wheeling, W. Va.—Expenditures for fiscal year, 1919-20—Continued.

	Per cent.	Amount.
<b>Upkeep of buildings, grounds, and equipment:</b>		
<b>Elementary schools—</b>		
Undistributed.....	0.1	\$499.29
White schools.....	6.4	27,075.64
Colored schools.....	.1	550.02
<b>Total.....</b>	<b>6.6</b>	<b>28,124.95</b>
<b>Secondary schools—</b>		
White schools.....	1.6	6,428.16
Colored schools.....		183.34
<b>Total.....</b>	<b>1.6</b>	<b>6,611.50</b>
<b>Total upkeep of buildings, grounds, and equipment.....</b>	<b>8.2</b>	<b>34,736.45</b>
<b>Auxiliary agencies and other activities:</b>		
Promotion of health of school children.....	1.7	7,101.89
After-school playground supervision.....		98.50
Lectures, graduation exercises, and celebrations.....	.1	535.75
Participation in expenses of Mozart School <sup>4</sup> .....		840.60
Contribution to teachers' pension fund.....		2,280.00
<b>Total.....</b>	<b>2.6</b>	<b>10,956.74</b>
<b>Investment:</b>		
<b>Additions and improvements—</b>		
Land and improvements to land.....	4.1	17,444.00
Buildings and heat, light, and plumbing equipment.....	2.7	11,598.01
Instructional equipment.....	1.3	5,402.90
Miscellaneous equipment.....	.1	355.00
<b>Total.....</b>	<b>8.2</b>	<b>34,799.91</b>
Payment of bonds (increase in ownership)—high-school bonds.....	2.4	10,000.00
<b>Total investment.....</b>	<b>10.6</b>	<b>44,799.91</b>
<b>Total expenditures.....</b>	<b>100.0</b>	<b>421,227.38</b>

<sup>1</sup> Teaching service of industrial education, home economics, physical instruction, etc., not distributed by school buildings.

<sup>2</sup> Miscellaneous building operation expenses not distributed by school building.

<sup>3</sup> Miscellaneous upkeep expenses not distributed by school building.

<sup>4</sup> The Mozart School expenditures are shared by three different school districts, of which the independent school district of Wheeling is one.

(e) The point that referendum approval of a bond issue authorizes a tax levy for a bond principal and interest fund in addition to other school taxes seems never to have been considered by the board.

(f) The legality of the school levy for 1920, which includes a tax for high school from a reading of such sections of the school law as could be found, appears questionable. But the law which relates to the independent school district of Wheeling is such a matter of patchwork that the question is probably only to be solved by an extensive legal search and then confirmed by a court ruling.

(g) The present policy of the board in regard to the teachers' pension fund as to appropriating a sufficient amount yearly to pay pension annuities without the principal of the fund being impaired should be incorporated permanently in the rules and regulations of the board.

(h) A statement of the expenditures of the schools in 1919-20 by functions has been prepared in detail and will be shown as an appendix to the report.

#### THE PUBLIC LIBRARY.

(a) Prior to the present year, when the board increased the library tax from 1½ to 1¾ cents, Wheeling has taken advantage of but one-fourth of its authorized power to tax 6 cents per \$100 for library purposes.

(b) Compared with 10 years ago the activities of the library have more than doubled.

(c) A balance sheet prepared for the library as of June 30, 1920, shows its net investment to be \$84,340.71, and its surplus \$1,816.65.

(d) An operating sheet for 1919-20 shows an excess of revenues over expenditures to the amount of \$1,616.65.

(e) A graph, covering period of the last 10 years, shows book circulation and cost per 100 books circulated. The cost of library administration and book service is so low as to merit criticism rather than commendation. A per capita circulation in Wheeling of 1.9 and a cost of \$8.37 does not show the liberality of such cities as Chicago, Cleveland, and Pittsburgh, which have a per capita circulation of 2.2, 4.8, and 2.5, respectively, and which expend \$10.30, \$13, and \$28.10 per 100 books circulated. (Analysis of library expenditures of those cities in 1916-17.)

(f) Chicago spends 22.2 cents, Cleveland 62.6 cents, and Pittsburgh 69.9 cents per capita for public libraries; whereas Wheeling spends 21.4 cents. Obviously Wheeling should begin the construction of branch libraries and be more liberal in its expenditures for library personnel and in its purchase of books.

#### CONSTRUCTIVE RECOMMENDATIONS FOR SCHOOL FINANCIAL AND BUSINESS PROCEDURE.

(a) What is vitally necessary for the schools is the establishment of a business department to be headed by a subexecutive who shall report to the board via the superintendent of schools.

(b) Such a department should contain an accounting staff of adequate size to furnish the superintendent, the board, and the public the same kind of financial and statistical information as is commonly required by any first-class business concern.

(c) Modern-accounting methods and procedure should be adopted.

(d) Up-to-date filing apparatus should be installed; likewise other labor-saving devices wherever practical.

(e) All contracting and purchasing should clear through this department, and a complete system of stores control should be put into effect.

(f) All janitorial and repair service should be under the technical control and supervision of this department, and under the managerial supervision of the various school principals.

(g) This department should be emphatically a service agency to the school system as a whole, to the superintendent, and to the board.

(h) A modern budget system should be adopted by the board. Such a budget should be prepared on the basis of functions and should include the originating of departmental estimates by the heads of the various school departments. These estimates should be transmitted to the business department for combination and analysis, and then be forwarded to the superintendent for review. He, as the schools' executive, should be responsible for the budget in its entirety, and in its presentation to the board it should represent the policy and program which he recommends for the schools for the ensuing year. The function of the board should then be the approval or disapproval in total or in part of the budget as submitted. Upon its approval and formal adoption by the board the budget should be the superintendent's legalized authority for the ensuing year's expenditures, and he should be the administrative official to be held responsible for the board for the execution of the budget as approved.

(i) An amendment to the school code should be immediately presented to the legislature, which will make mandatory the adoption of the school budget for the ensuing year prior to the close of each fiscal year, and thus eliminate the hiatus of financial authority which at present exists between the beginning of a school year and the date prescribed by law for the adoption of the budget by the board several weeks later.

#### IV. SCHOOL BUILDINGS AND GROUNDS.

##### DIFFICULTIES INHERENT IN THE SITUATION.

The city of Wheeling is so crowded between the hills and the river that there are really no vacant spaces suitable in size, contour, and position upon which to locate schoolhouses in any satisfactory way; and therefore the school board is faced with great difficulty when the problem of selecting new sites arises. One of two things will have to be done if the board insists on proper sites, as it should: It will be necessary either to enter extensive condemnation proceedings in order to clear spaces large enough, or else accessible sites must be found beyond the ordinary limits of the city and some arrangements made for transportation to these.

It is recommended, therefore, that the board take this matter in hand at once, and after due consideration and public discussion settle on a policy to pursue when future buildings are under consideration. Each school principal, with the cooperation of his teachers, should be asked to prepare a "pin map" showing where the students now attending school live. These maps will show at a glance from what parts of the city the children come and how, relatively, they are situated with reference to the present buildings. If such maps are prepared each year, then objectively they will show any possible shifting of the clientele and a hint at least of how to anticipate needs.

##### SURROUNDINGS AFFECT THE EFFICIENCY OF A SCHOOL.

In addition to the problem of congestion as it relates to needed sites, the problems of dust and noise should receive more consideration than heretofore. Union School site is a horrible example of selecting a lot too close to a noisy, dirty, and dangerous railway; and the Ritchie School is not much better off.

The present school lots are totally inadequate in size to permit any playgrounds of real consequence. A real school playground, big enough to satisfy school children, is the best democratizing agency possible, and far more effective most of the year for health development than any gymnasium.

##### ORIENTATION AND LIGHTING.

Classrooms of school buildings are best lighted and best purified by sunshine when the windows open toward the east or west only.

The lighting of all the school buildings in Wheeling is seriously faulty. In the first place, all the classrooms where it was possible have bilateral lighting. This is bad, and all thoughtful teachers know it. Under such conditions either the teacher or the pupils must face toward windows.

In most cases the pupil is compelled to work in his own shadow, and because of cross lights he is handicapped in many other ways.

In all future buildings the house should be so planned and set on the lot as to give east or west exposure on the long side of all classrooms, and no windows should be set in other walls. These windows, at least five in number, should be set with sills 4 feet above the floor; and should run to the ceiling, or as close to the ceiling as possible. They should be grouped closely together, and the glass area should be approximately one-fourth of the floor area.

Adequate reasons for these directions may be found in any good book on school hygiene.

##### HEATING AND VENTILATION.

The hot-air heating systems found in most of the present school buildings do not represent the best practice, nor the most economical for school buildings. A low-

pressure steam heating plant is the best. Direct radiation in the rooms with thermostatic regulation, but without the use of fans, will in the long run prove most efficient.

#### ADEQUATE SUPPLIES OF FRESH AIR ESSENTIAL.

It is almost impossible with hot-air furnaces to keep the various rooms evenly and properly heated and healthfully ventilated. In future buildings low-pressure steam heating should be installed, with ample radiation in each room, controlled by thermostats, and teachers should be required to regulate the ventilation through properly constructed windows.

#### JANITOR SERVICE.

The janitor service in the school buildings of Wheeling is, with few exceptions, inferior, and the prime cause of this inefficiency is due mainly to the fact that the janitors are not placed directly and specifically under the direction and control of the principals of the various schools. There should be no divided responsibility here. The principal should be held responsible for the hygienic condition and safety of the building, and this responsibility necessarily carries with it authority over the service of the janitor.

The janitors should be well paid for their arduous services, and should be selected and retained by reason of their efficiency and ability to perform their very important duties. Next to the principal of the school, the duties and opportunities of the janitor call for good judgment, initiative, and special knowledge almost as much as do those of any teacher.

Many liberties are now being taken by the janitors of some of the buildings, such as storing their own furniture, vegetables, canned goods; doing their own family washing during school hours, etc., in school buildings. Such use of school buildings is not desirable, and should be discontinued.

#### FLOORS OF SCHOOLHOUSES.

The school buildings of Wheeling were originally furnished with unusually good floors, but they have been badly abused and show lack of proper care. Most of the old buildings were supplied with fine oak floors, and these have held up well under the abuse they have been subjected to. They are now dry; cracks have opened, and splinters are appearing. This is largely due to the wet scrubbing they have had to undergo.

Floors should never be scrubbed with soap and water, for this is the surest and quickest way to ruin them. They should be sanded and swept clean, and then oiled and swept with some sawdust preparation containing the proper proportion of oil, sand, and sawdust. This will keep the floors cleaner, prevent clouds of dust from rising, and also prevent the boards from alternately swelling and shrinking, as will be the case when scrubbed with soap and water.

#### FLOORS SHOULD BE CLEANED AND OILED.

All the floors of the various buildings should be thoroughly cleansed and then cautiously and properly oiled with a light oil. Oiled floors are more free from dust, last longer, look better, save work in keeping them clean, and are more hygienic than dry floors.

#### COLOR OF WALLS.

The treatment given to the walls of the schoolrooms in Wheeling generally violates not only the canons of good taste but the requirements of utility. Not only are many of the rooms unsightly and esthetically annoying but the effect is even harmful, in that the rooms are darkened when more light rather than less is needed.

Scientific investigation has determined in no uncertain terms the colors which are best to use on schoolroom walls, and school boards should make sure that a decorator who enters a schoolroom knows what is best and will then faithfully follow intelligent guidance.

The following brief summary of suggestions resulting from investigations on this subject may be helpful in planning future changes:

1. The wall space between the floor and the window sills, and the chalk troughs, should be a light brown.
2. Side walls and ceilings should be in a light buff, or cream, depending to some extent on the illumination and the location of the building with reference to climate. A light gray is also acceptable. Colors from the red end of the spectrum should never be used.

#### CLOAKROOMS.

Cloakrooms are necessities in all elementary schools, and locker rooms for high schools. The plans of the older buildings in Wheeling made insufficient space for cloakrooms, and as a result the children's wraps and other articles of clothing are often piled up together, thus offering opportunity for the transmission of parasites from child to child and also preventing proper airing or drying in damp or rainy weather.

#### BLACKBOARDS.

The various school buildings of Wheeling are supplied with excellent slate blackboards, and in general these are in splendid condition. However, they are not always set at the proper height to meet the needs of the children through the various grades.

In all future buildings, in those rooms designed for first and second grades, the blackboards should be set 26 inches above the floor; in those for the third and fourth grades, 28 inches above the floor; in those for the fifth and sixth grades, 32 inches above the floor; and in those for the seventh and eighth and high-school grades, 36 inches above the floor. The blackboard should be 36 inches wide, from top to bottom, except at the teacher's end of the room, where it should be 48 inches wide.

#### STAIRWAYS AND FIREPROOFING.

If the furnaces, coal rooms, chimneys, stairways, and halls of school buildings are made fireproof; if janitors are careful to keep all greasy mops or rags, oils, and other inflammable materials in fire proofed rooms; and if all electric wiring is inclosed in steel tubes and otherwise properly protected, then there is little danger to the children or to the buildings from fires starting from within. Should a fire menace from without there will always be ample time to get the children out before they are endangered.

There is little or no value in fire escapes for school children, because with safe and adequate stairways they can be gotten out of danger by means of carefully planned and thorough fire drills in less than one-tenth of the time, and with far greater safety, than through any fire escape ever made. The chief effect of fire escapes at public-school buildings of two stories (and they ought not to be any taller) is to produce a feeling of false security in the minds of parents.

#### CONSTRUCTION OF STAIRWAYS AND EXITS.

Stairways should have ample landings, wide treads, medium risers, and strong, properly placed handrails. They should be well lighted and sufficient in number and capacity to meet safely all possible demands.

Many, in fact, nearly all, of the older school buildings in Wheeling are a fire menace, because practically none of the precautions of construction noted above have been complied with. Hence, janitors should be constantly on guard, and should not be permitted to leave their buildings during school hours. Elsewhere this report emphasizes the need of keeping basements from debris.

### SIZE OF CLASSROOMS.

Forty pupils are enough for a teacher to handle in the elementary grades, and a classroom 30 feet long, 22 feet wide, and 12½ feet high is sufficient space for this number of pupils. This will accommodate five rows of desks, with eight in a row, and allow sufficient room for aisles and other necessary space. Many of the classrooms in the old buildings are more nearly square, and contain considerably more cubic feet of space than necessary. This increased the cost of the buildings unnecessarily, and likewise has constantly demanded more heat, more cleaning, and more expense for general upkeep.

Classrooms for high schools must vary to accommodate large, medium, and small classes. Satisfactory dimensions and arrangement of rooms can be arrived at only when the architect consults with the principal and teachers who are to use the particular building in question.

### TOILETS AND URINALS.

All toilet seats should face toward windows, and should be set along walls in single rows, and not back to back. Such rooms should be arranged in stacks on the main floors and kept out of basements. These rooms should open out of rest rooms, lavatories, or locker rooms, and not directly into halls. If possible, direct-pressure wash-out fixtures should be installed. Juvenile sizes should be installed for the first four grades at least. All urinals should be set under windows and furnished with glazed white stalls and set a little below the level of a tiled floor. While this floor should slope slightly toward the urinals, it is a serious blunder to make this slope too far back.

The best fixtures are in the long run most economical. Toilet rooms must have plenty of light and sunshine and abundant ventilation.

### PLACING DESKS.

If desks are fastened to the floor, great care must be taken to space them properly, and at about 2½ inches minus distance. That is to say, a vertical line from the edge of the desk to the floor should strike the seat board about 2½ inches back from its front edge. Desk chairs are better, for these can be selected in a number of sizes, and can be shifted to take advantage of conditions and demands. They are not fastened to the floor, and can therefore be adjusted more readily to individual children.

### STORAGE OF FURNITURE AND OTHER DISCARDED MATERIAL.

Every city system of schools should have a central storage building and shop facilities, into which to check all surplus furniture where repairs may be made, and where lists of all temporarily unused equipment may be kept. Under this plan, whenever any item of furniture, material, or supplies is needed in any building, the superintendent can quickly and accurately determine whether the item requisitioned is available or whether it is necessary to purchase.

### SUMMARY OF BUILDING NEEDS.

#### MCKINLEY SCHOOL.

The lighting of the classrooms in this building is bad and has been from the first. Whenever windows are placed on two sides of a classroom either the teacher or the pupils will have to face glaring windows.

It is possible to take two of the windows from the north and south ends of these rooms and set them in the east and west walls, and to close up the third window to the north and south. While this will give far better illumination than is now provided,

it will not furnish the requisite ratio of glass surface to floor surface for any of the rooms. There seems to be no remedy for this deficiency, because the classrooms were not properly proportioned as to length and width when the building was planned.

The walls in this building should be refinished in a light color. A light creamy buff, or a very light gray is safe and acceptable. The present disagreeable green is not only annoying to sensitive children but also absorbs a great deal of needed light.

The floors of this building have been badly damaged by repeated scrubbing, and should be thoroughly cleaned and then oiled.

#### RITCHIE SCHOOL.

The old building of this school should be discarded at the very earliest opportunity, for it would cost more to reconstruct it to meet modern demands than to construct an entirely new building. No money should be expended on this building, save that which is necessary to keep it as safe and clean as possible during the time it may be used.

The basement should be thoroughly cleaned of all rubbish and broken and discarded furniture.

When this building was inspected by the representative of the survey commission, it was necessary to send for the janitor, who could not be found about the building. There is too much at stake, with a building occupied by children, to allow any possible danger to arise without some responsible person at hand to take immediate action. If some imperative mission takes the janitor away from the building during school hours, some other responsible person should be substituted until his return. In every such case the principal should approve the arrangements in advance.

The ventilation of neither building at this school is adequate, and the teachers should all be carefully directed how to use the windows most effectively for this purpose.

Unfortunately, the newer building is situated so close to the railroad tracks that effective school work is practically impossible.

With the exception of bilateral lighting, setting the windows too near the floor, and insufficient cloakroom space, this annex is quite satisfactory as far as the building is concerned.

The fan room needs cleaning, and the fine maple floors provided should be thoroughly cleaned and oiled immediately, and scrubbing with water discontinued.

#### WEBSTER SCHOOL.

No expensive changes looking toward making this building meet acceptable modern demands should be undertaken. It should be kept in as good condition as possible, and abandoned at an early date, as soon as a new and modernly planned larger building can be provided to take care of the children in this district and most of those now attending the Ritchie School.

The following repairs should be made at once: (1) Correct the insanitary condition of the urinal; (2) cut down the sides of the stalls in both toilet rooms, so to give better light and better ventilation; (3) clean out the basement, especially the fan room; (4) retint the walls in a light cream color; (5) oil the floors, and discontinue scrubbing them with water; and (6) guard the building carefully to prevent fires.

#### CENTER SCHOOL.

No expensive repairs should be made on this building, and it should be abandoned as soon as the board can command the means to do so.



## MADISON SCHOOL.

It is unfortunate that in the reconstruction of the old building the windows were not changed from the old type of windows in adjoining walls of classrooms to the better plan of unilateral lighting. It is probably inadvisable to make these changes now, but the children and teachers will necessarily suffer as a result of this oversight.

It is not too late, however, to correct the faults of the toilets and urinals by installing modern appliances in a modern way. The white walls of this reconstructed building should be tinted in a very light buff, while the ceilings may either remain white or, better, be toned down so as to forestall glaring lights.

It is to be regretted that the assembly room was constructed at great expense with a sloping floor, thereby practically limiting its use to auditorium purposes only. At less expense in construction and furniture, it might have been made to serve as an auditorium, as a gymnasium, a study hall, a community entertainment and exhibition room, and for other purposes.

It is inadvisable to put manual training, home economics, or any other kind of important school work in basement rooms, and those classes now situated in the basement of this building, or any other school in the city, should be removed therefrom at the earliest possible date. Such work is very important work, and should not be handicapped by being put in unsuitable quarters.

## WASHINGTON SCHOOL.

This building is a duplicate of the old Madison building, and is a monumental demonstration of how not to plan a school edifice. It would be poor economy to undertake a radical reconstruction of this building, and the only thing to do is to use it till such time as the board can get sufficient means to provide a new building in a better location away from the noise, smoke, and dust of the railway yards.

## CLAY SCHOOL.

It would be unwise to undertake any substantial reconstruction of this building. It should be kept in as safe and sanitary condition as possible, until it can be displaced with a new building on a larger lot.

A few repairs and changes should be made immediately:

1. The hot-air ducts of the old and displaced heating system, leading from the furnace room to the various classrooms, should be carefully and securely sealed in order both to prevent dust and foul air ascending into the classrooms, and to eliminate the very definite fire hazard involved.

2. There should be better and more thorough fireproofing on the joists above the boilers and smoke pipes. The fire drills now used should be continued, and with every added improvement possible.

3. The urinal is unsatisfactory, for the slanting slate is too wide and too steep for safety. This should be cut off to a point within 16 inches of the drain, the level cement floor continued to this point, and the iron bar removed. These changes, for obvious reasons, will keep this room in a much better sanitary condition.

4. Certain rooms have erroneously placed desks, and these facts were pointed out to the principal and plans suggested for better arrangements.

## JEFFERSON BUILDING.

An additional window should be set in the east side of each classroom opening toward the east, and one in each classroom opening toward the west, and the windows on the north and south sides of these rooms should be closed up.

The desks in the east rooms should all be made to face the south, while those in the west-rooms should be made to face the north. Then, if these desks are grouped as closely as practicable to the window side, with eight desks in a row from front to back, in five rows, the pupils will then get light from the left and the teacher will not have to face the light.

While this arrangement will not give so much area of glazing to each room as they now have, the light will be much better and the teacher will not have to face the light.

The warm-air registers in the floors of the classrooms should be removed and placed in the walls, if possible, about 8 feet above the floor. If this can not be done, a better heating plant of low-pressure steam, regulated by thermostats, should be installed with direct radiation in the rooms. The fan should then be removed and dependence placed upon windows for ventilation. When the inspection was made, the ventilation was faulty and the rooms were too hot. This is a good building. With proper care, and the changes suggested, it can be used for many years safely and with satisfaction.

#### UNION SCHOOL.

This building is most unfortunately placed so near the steam railway tracks as to cause a great loss of time from noise and suffering from the gas-laden smoke of passing trains. There are many good features in this building despite bad fenestration. Nothing can be done to get rid of the noise, which will in all probability increase instead of decrease. It would be difficult and expensive to rearrange the windows, and so only the following recommendations are offered:

1. The thermostatic system is out of order, and should be corrected at once, for not only is the health of the teachers and children involved, but also the economic use of fuel.

2. There is a good deal of debris and furniture, some of it not belonging to the school, stored in the basement. All of this not needed should be removed and stored elsewhere.

3. The toilet seats should be kept in a more sanitary condition, and all flushing apparatus should be thoroughly cleaned and kept in better repair. Some of this apparatus was not working at all. As soon as possible, individual and direct flush toilet seats and enameled urinals should be installed. The former should all be set to face the windows, while the latter should be set directly beneath the window. This will insure better ventilation, a lighter room, and a great saving in water and electricity.

#### HOME ECONOMICS BUILDING.

The basement of this building is rather poorly ventilated, and is likely to be damp in summer. The furnaces are rather dangerously close to the joists above, and, though gravel has been placed on their tops, great care should be given these in severe weather, when heavy firing may become necessary, to prevent overheating and consequent danger.

#### HIGH SCHOOL.

The high-school building was miserably planned, and beyond that little can be said that will be of any help to the board. In the first place, the lot was totally inadequate and greatly handicapped the architect. In the second place, there is evidence everywhere that the plans were not submitted to those who know the needs of a modern high school, and that no one studied them carefully from the point of view of securing a serviceable and hygienic school building.

The lighting is faulty, many of the rooms are badly proportioned, the basement is cut up into dark cobby-holes and passageways, and exterior decoration seems to have been preferred to adequate lighting.

It is a painfully disappointing building. Nothing can be done in an economical way to remedy its defects or make it more useful and acceptable, and the youth who flock to it for many years to come will suffer because no one who knew what they needed was called to supervise its planning.

The only changes now practicable are a few readjustments of desks and classes so as to conserve the vision of the teachers and children, and a general cleaning up of the basement.

#### LIBRARY.

In view of the fact that no member of the survey commission has made a special study of the requirements of a library building, this report discusses only such general questions as those of heating, lighting, etc.

In the reading rooms the windows were set so near to the floor that it is impossible to set bookcases under them, and hence a mistake was made both from the point of view of the loss of book space and better illumination. The bottoms of windows for reading rooms should always be well above the level of the eyes of the reader when seated.

This is particularly true on the second floor. There the small windows drop almost to the floor line, while the tops are many feet below the ceiling above. It must certainly be true that the upper rooms of this building are very warm in summer, and that adequate ventilation is peculiarly difficult.

It seems evident that the plans of this building were not thoroughly studied from the point of view of use, and that much help might have come from calling upon practical librarians for suggestions.

#### LINCOLN SCHOOL.

The basement of this building needs cleaning and repairing, especially the cold-air chamber and the door leading to it. The girls' toilet needs better ventilation and lighting. The grounds in the rear should be drained and graveled. The electric lights in the domestic science room should be fitted with proper shades to reduce the glare of uncovered bulbs; and the forge better protected to prevent smoke and gas from escaping into the rooms above.

The recent additions made to this building were badly placed, because of the cutting off of light from other rooms. No further direct additions to this building should be made. If more room is needed, another building should be constructed on another lot, for the heating plant is now insufficient in severe weather for safety, and further additions would interfere with the lighting, already very bad.

## V. THE BUILDING PROGRAM.

### WHY WHEELING NEEDS A SCHOOL BUILDING PROGRAM.

The following paragraphs outline the main features of a school building program looking forward over a number of years. Action on these proposals should await decision on the more fundamental need of the Wheeling schools, namely, that of reorganization of the scheme of administration.

Nevertheless, one of the serious weaknesses in the school situation has been the lack of a comprehensive and forward-looking building program, guided by expert knowledge of the requirements of a modern school system. Even with a reorganized school board, therefore, the school buildings and equipment will need to be modified in order to make possible all of the improvements suggested in this report.

Modifications in the school building situation must necessarily be made gradually and only after careful study of possible future contingencies.

**SCHOOL BUILDINGS DO NOT MEASURE UP TO MODERN REQUIREMENTS.**

Wheeling's school plant is not modern. With the exception of Madison and Union, there has been no new elementary school for 24 years. Five of the 9 elementary schools were built 34 or more years ago. One was built 49 and another 50 years ago. The buildings are old and archaic in construction; in a number of them the sanitation is bad; and in others the lighting is so inadequate that in some States the children would be forbidden by law to enter them.

With few exceptions, the buildings are utterly lacking in modern educational facilities, such as auditoriums, gymnasiums, shops and laboratories, drawing and music rooms, libraries, and playgrounds.

**IMPORTANCE OF WORK AND PLAY AS WELL AS STUDY IN SCHOOLS.**

What Wheeling needs primarily is to realize that opportunities for work and play in school are educationally as important as provision for study. There has evidently been an attempt to provide some modern school activities in some schools, but they are very inadequate. One reason is because the public in general does not fully realize that children have always been educated through work and play as well as study, and that they can not be deprived of any of these three things if they are to receive a full, rich education.

Fifty years ago, children had opportunities for this healthy work and play outside of school so that it was not necessary for the school to provide anything but classrooms. But during the past 50 years has come the growth of the modern city, with its factories and mills, and office buildings and tenements which go up on all vacant city lots and which have deprived children of the opportunities for the wholesome work and play which are essential elements in their education. The city home or apartment, unlike the farm, with its many opportunities of "learning by doing" can offer few educational opportunities in the way of healthful work which develops the ability to think by attacking problems to be solved. There is no planting and harvesting to be done; few, if any, animals are to be taken care of; and it is a rare city home that has a workshop or laboratory. Yet children, until recently, have received much of their education through the opportunity to handle tools, to take care of animals, and to experiment in making and using things.

**SCHOOLS MUST RECOGNIZE CHANGING COMMUNITY CONDITIONS.**

But the city not only fails to educate children in the right direction; it educates them in the wrong direction, for the street, with its dangers to the physical and moral life of children, too often becomes their only playground; and street play means education, not in health and strength and wholesome living, but precocious education in all the vicious side of a city's life.

For these reasons it has come to be recognized that the city school must not only provide classrooms, but it must also return to the children the opportunity for the healthful work and play which the home can no longer supply. This means that school buildings must contain not only classrooms, but auditoriums, gymnasiums, laboratories, drawing and music rooms, shops, libraries, and playgrounds where these activities may be carried on.

The main problem in the building program is to recognize existing buildings and plan new buildings so that the children in each building may have not only classrooms, but modern educational facilities. How is such a program to be carried out within the financial ability of the city?

There are two methods of meeting the situation. One is by the traditional method of school organization in which all children are expected to be in school seats at the same time, and if provision is made for special activities, such as shops or cooking rooms, the classrooms remain vacant when such facilities are in use.

### THE WORK-STUDY-PLAY OR PLATOON SCHOOL.

The other method is commonly known as the work-study-play or platoon plan now in operation in many cities in this country, notably in Pittsburgh, Pa., where the plan has been in operation for six years.<sup>2</sup> This plan makes modern educational facilities financially possible for all children by using all parts of the school all the time instead of letting classrooms lie idle while shops and laboratories are in use. That is, it applies the principle of the balanced load, or multiple use of facilities. Under this plan, a school is divided into two parts, each containing all grades, and while half the school is in classrooms, the other half is using special facilities. At the end of one or two periods, the group of children who have been in classrooms go to special facilities, and the other group goes to the classroom. This means that only half the usual number of classrooms is needed, i. e., 12 classrooms in a 24-class school. A classroom costs at the present time \$16,000 in most parts of the country. Therefore, by using 12 instead of 24 classrooms \$192,000 is saved and released for special activities. Under the work-study-play plan, every child gets the same amount of time for the three R's, but he also has 40 minutes for play a day, 40 minutes of auditorium, and 40 minutes of shop or science or drawing. Furthermore, because of the flexibility of the program, the school can be adapted to the needs of the child, instead of vice versa.

### RECOMMENDATIONS FOR A SCHOOL BUILDING PROGRAM.

By abandoning 6 old buildings, putting up 3 new buildings, and putting in modern equipment in 3 existing buildings, it is possible for Wheeling to have a school plant in which every school shall have adequate classrooms and also an auditorium, gymnasium, shops, cooking and sewing rooms, science laboratories, drawing and music rooms, a library, and kindergarten. *And it is possible to do this within the financial limits of the city.*

The schools which should be abandoned ultimately are the Ritchie, McKinley, Clay, Jefferson, Center, and Lincoln. This will eliminate the costs of upkeep and outlays for these buildings, which in the year 1920 amounted to \$32,842.77. Wheeling has too many small buildings. The larger the buildings, within limits, the richer the facilities that can be given to children; the older and smaller the building, the more expensive it becomes. For example, the per capita cost of the Ritchie School with an enrollment of 510 pupils is \$59.10, whereas the per capita cost of Madison with 906 pupils is only \$45.35. A summary of recommendations for each school district follows.

#### RITCHIE DISTRICT.

Ritchie and McKinley Schools should both be abandoned, as they are old, insanitary buildings and archaic in construction. Erect in this district a new school building for a 24-class school which would house the children in both Ritchie and McKinley. Under the work-study-play plan, it would need 12 classrooms, 2 shops for boys, a domestic science and sewing room for girls, 1 drawing room, 1 music room, 1 mechanical drawing room, 1 library, 1 chemistry laboratory, and 1 physics laboratory. The total cost would be \$462,000. Under the traditional plan of school organization, it would be \$659,000. This school should be a combination elementary and junior high school. The high school is so far away and expensive to reach that the children are not likely to go to it from this district, unless their interest is aroused through this preliminary work. The way to increase the enrollment in the high school is by developing modern elementary schools.

<sup>2</sup> See Economic Values of the Platoon Type of School Organization, prepared by William F. Kennedy, with the McKeloy School of Pittsburgh as a type illustration.

**CLAY DISTRICT.**

Clay and Jefferson Schools should be abandoned, as Clay is an old, insanitary building, and Jefferson is too small to maintain economically. Erect a new building for the Clay and Jefferson and the seventh and eighth grade pupils from the Union School, leaving Union as a 6-grade school. This school would also be a 24-class school. The cost would be the same as for the Ritchie School.

**WEBSTER DISTRICT.**

Center School should be abandoned and the pupils in Center and Webster housed in the Webster School. If this building is organized on the work-study-play plan, there would be ample room for the children of both schools. There would be 988 children, or a 24-class school. There are 18 classrooms in the building, a manual-training room, and a cooking room. Twelve of the classrooms could be used as classrooms, one for an auditorium (it was originally built for this purpose), one for a kindergarten, and the other six for special activity rooms. There is a playground a block and a half away, and a portable gymnasium could be erected there. The cost for equipment for the special activities and for the gymnasium would come to \$10,000. Under the traditional plan, 12 additional classrooms would be needed at a cost of \$192,000.

**WASHINGTON DISTRICT.**

Washington is a well-built school, and though not modern can be made to furnish modern educational facilities for children, if operated on the work-study-play plan. Allowing for a kindergarten and a ninth grade (for this should also be a combination elementary and junior high school), there would be 633 children, or 16 classes in the school. There are 16 rooms: 8 could be used for classrooms and the other 8 for special facilities—2 shops for boys, 1 drawing room, 1 music room, 1 nature-study room, 1 library, and 2 rooms for an auditorium. The lot to the south of the school should be purchased for an additional playground, and the house used for domestic science and a kindergarten. A portable gymnasium should be erected on the school grounds. The cost of equipment of the special activity rooms would be \$9,000, and the gymnasium \$3,500, making a total of \$13,500. On the traditional plan, 8 additional classrooms would be needed at a cost of \$128,000, and there is no space in which to erect them.

**MADISON DISTRICT.**

Madison School is a comparatively new building, and although unfortunately constructed in many ways, it is superior to many of the buildings. It should be made into a combination elementary and junior high school, which would give an enrollment of about 1,086, or 28 classes. This should be made into a 30-class school. Counting both the old and new buildings, there are 29 classrooms available without counting the manual-training room in the basement. Under the work-study-play plan only 15 classrooms would be needed. The other 13 rooms could be used as follows—1 chemistry laboratory, 1 physics laboratory, 1 freehand drawing room, 1 mechanical drawing room, 1 music room, 1 sewing room, 1 cooking room, 2 shops for boys, 1 nature study room, 1 library, and 1 kindergarten. Two rooms could be used for gymnasium for girls. A gymnasium for boys could be constructed between the left wing and the auditorium at a cost of approximately \$25,000. The cost of equipment for the special rooms would be \$7,500. The total cost, \$32,500. Under the traditional plan, 15 extra classrooms would be needed. They would cost \$240,000 and there is no space in which to put them up.

## LINCOLN SCHOOL.

This is an old, inadequate building, placed inconveniently on a hill, which, if the Wheeling Improvement Association plans materialize, will be used for a national highway connecting with Greater Wheeling. The building should be abandoned and a new building erected at the foot of the hill near the Negro church. As this is a combination elementary and high school, the building would have to be constructed to accommodate 8 elementary classes and 2 high-school classes. Under the work-study-play plan, 4 classrooms would be required for the elementary school and 2 for the high school. There should also be a chemistry laboratory, a physics laboratory, a shop for boys, 2 shops for girls, a drawing room, a music room, a library, kindergarten, auditorium, and gymnasium. All these activities are carried on in the school at the present time, but with very inadequate equipment. A new building of 16 units, at a cost of \$16,000 per unit, would be \$256,000. Under the traditional plan, 6 additional classrooms would be needed and the cost would be \$352,000.

*Summary of costs of building program.*

School.	Cost under work-study-play plan.	Cost under traditional plan.
Ritchie district, new building.....	\$462,000	\$659,000
Clay district, new building.....	462,000	659,000
Webster district.....	10,000	192,000
Washington district.....	13,500	128,000
Madison district.....	32,500	240,000
Total white elementary schools.....	979,500	1,878,000
Lincoln School.....	256,000	352,000
Total.....	1,235,500	2,230,000

## THE HIGH SCHOOL.

According to the above plan, there will be three combination elementary and junior high schools in the city, one at Ritchie, one at Madison, and one at Washington. This will take the ninth grade from these districts out of the high school, thereby leaving plenty of room for the growth in the high school. Such an arrangement will also doubtless result in arousing among the children in these districts greater interest in going to high school because the junior high school work will stimulate their interest in the things that the high school has to offer.

## CAN WHEELING AFFORD THE PROPOSED BUILDING PROGRAM?

Wheeling can afford the proposed building program. Wheeling's taxable wealth is given at \$65,000,000, although it is estimated that on a 100 per cent valuation the taxable wealth of the city would be over \$93,000,000. (See report on school finance.) Compared with other cities of the same population, but with even less taxable wealth, the amount of Wheeling's school property (\$1,071,454.13) is below the average. Among 45 cities of the same class it ranks thirty-fourth in the amount of school property. Bayonne, N. J., is also an industrial city of 55,000 population, and its taxable wealth at 100 per cent valuation is \$68,485,000. The amount of its school property is \$2,524,000. In other words, up to the present time, Wheeling has not spent on her public-school plant the amount of money which her wealth justifies.

### BONDING THE CITY.

The independent school district of Wheeling is able to bond the city for schools up to \$3,270,200. It has outstanding bonds for only \$120,000. In other words, the district has a leeway of over \$3,000,000 before reaching the limit of bonded indebtedness for schools. There is no reason from a financial standpoint why Wheeling should not carry out a building program which would give all the children of the city the most modern educational advantages...

Wheeling can not afford *not* to give these modern educational advantages to her children. It is said that America is the land of equal opportunity in education, but this does not mean opportunity for uniform education, but opportunity for the development of the varied gifts of many individuals. Democratic education means variety of opportunity in accordance with the needs of the individual. If Wheeling does not give this variety of opportunity in work and study and play to the children of all its people, then it is failing to tap the reservoirs of power for its coming citizenship. Moreover, it is laying up trouble for itself in the future, for nothing is more serious to any community than to have the great mass of people feel balked in their power of self-expression and attainment.

## VI. THE HIGH SCHOOLS.

### SELECTION OF SUBJECTS AND ORGANIZATION OF CURRICULA.

(1) Needs of various groups of pupils should be more definitely served through reorganization of the five curricula now offered.

(2) A scientific curriculum and a fine arts curriculum should probably be added.

(3) Requirements as to subjects should be somewhat as follows (many of these are already in effect):

(a) English, two units, first and second year same for all pupils; third and fourth years differentiated to meet needs of (1) pupils in classical and fine arts curricula, (2) pupils in commercial and industrial arts curricula; pupils in other curricula will choose between these two types.

(b) Present requirement of 2½ units of mathematics should be limited to classical and scientific curricula; one unit of business arithmetic in commercial curriculum; one unit of business arithmetic or composite mathematics in the general, industrial, and household arts curricula.

(c) Three units of social studies in the general curriculum, one in commercial, and two in all others. American history and civics, one-half unit each, required of all pupils.

(d) Science, three units in scientific curriculum; one unit in all others.

(e) Four units of foreign language in classical curriculum; two units in fine arts and scientific curricula.

(f) Four units of household arts or industrial arts in household arts and industrial arts curricula, respectively; one unit of either in general curriculum.

(h) Four units in art or music in fine arts curriculum.

(i) Physical training, one-fourth unit each year required of all pupils.

(j) Include in each curriculum only the elective subjects appropriate to it.

(4) Part-time classes for employed boys and girls should be developed; also a two-year vocational curriculum preparing for wage earning.



**CLASSROOM WORK AND EXTRA-CURRICULAR ACTIVITIES.**

- (1) Attitude of teachers especially commendable: interest and enthusiasm evident in work observed.
- (2) Effectiveness of instruction may be increased through study and experimentation along the following lines:
  - (a) Better assignment of lessons and direction of study.
  - (b) More supplementary materials and wider application of class work to life situations.
  - (c) More responsibility should be placed on pupils.
  - (d) In daily work and semester examinations, more emphasis should be placed on questions involving comparison, judgment, interpretation, reasoning.
- (3) The extra-curricular activities (such as literary and debating societies, musical organizations, athletic sports) should be broadened in scope and more definitely utilized for their educational possibilities.

**ADMINISTRATION AND SUPERVISION.**

- (1) A director of each curriculum should be appointed to assist the principal in various ways.
- (2) Each group of closely related subjects should be organized into a department, and the teachers organized under a chairman for study of materials, methods, and special problems.
- (3) A specially trained and experienced adviser or dean of girls should be appointed; the principal can act in this capacity for boys.
- (4) Present methods of classifying pupils should be supplemented by the use of intelligence and other educational tests and measurements.
- (5) Present system of marking on basis of 100 per cent should be changed to system of 4 or 5 letters; or marks may be given only in multiples of 5.
- (6) A cafeteria under the supervision of the household arts department is needed.
- (7) The present noon intermission should be abolished, and time for lunch limited to two periods, one-half of the school being scheduled for each period.
- (8) A skilled teacher, who is also trained in library methods, should be assigned to each high school as librarian, responsible to the principal, to maintain and conduct a branch library.
- (9) The industrial arts department should be more adequately housed.
- (10) The commercial department should be furnished additional equipment.
- (11) A well-trained record clerk should give full time to maintaining more complete system of records.
- (12) Definite steps should be taken to increase the high-school attendance.

**IN GENERAL.**

- (1) A system of junior high schools, comprising grades 7, 8, and 9, should be established.
- (2) A building program, looking toward buildings better adapted to the needs of secondary education, should be planned for a period of years.
- (3) A special study should be made of the needs of colored pupils, with a view to placing greater emphasis on vocational subjects.
- (4) The teaching schedules in a few cases are too heavy.

## VII. THE ELEMENTARY SCHOOLS.

### INTRODUCTORY.

Every teacher in the elementary schools was visited at least once, usually for a full lesson period; many teachers were visited more than once, and by more than one member of the staff. In preparation for these personal observations educational tests in handwriting, reading, arithmetic, spelling, and vocabulary, were given throughout the school system, so that definite, objective evidence was available to supplement the judgments of classroom teaching. In addition to these tests and observations, written lessons, notebooks, examination papers, and other written evidence of school work were collected and carefully studied.

The report is very adverse. A few teachers are doing excellent work, but on the whole the community is not receiving fair returns for money expended on the elementary schools.

### REORGANIZATION ON JUNIOR-HIGH-SCHOOL BASIS.

The school system should be reorganized so as to provide public kindergartens; elementary schools of six years; at least three junior high schools, comprising grades 7, 8, and 9; and a senior high school of three years. A modified form of departmental instruction should be adopted for grades 4, 5, and 6.

### A MODERN COURSE OF STUDY NEEDED.

Responsibility for the present course of study, which is wholly unsatisfactory, rests directly on the administration, not on the teachers.

No attempt has been made to draft a course of study adapted to conditions and needs in Wheeling, or reflecting current ideals in education. Many of the topics now required in arithmetic, grammar, and other subjects should be eliminated.

There is no discoverable relationship between the various subjects of instruction, and in general the course is many years behind the best current practice. Civics, elementary science, and illustrative handwork are conspicuous by their absence. The course of study is uniform throughout the city, and no allowances are made for differing degrees of ability among children.

The course of study should be entirely reorganized, and based upon the principle of meeting the needs and abilities of children at successive stages of development.

The very formal type of work in handwriting, arithmetic, etc., in the first two grades should be eliminated, and for it should be substituted free play, oral language, nature study, modes of expression in the manual arts, and other activities based on the children's experiences.

A specialist should be employed to work with the principals and teachers in the construction of a modern curriculum for the Wheeling schools.

Too much attention is now given to formal spelling, grammar, and arithmetic; while too little or no attention is given to geography, history, literature, oral language, illustrative handwork, drawing and music for appreciation, elementary science, supplementary reading, civics, physical training, and play.

### TEACHERS GENERALLY UNPREPARED FOR SERVICE.

Only 24 of the 174 teachers in the elementary schools meet reasonable standards of qualifications. Only 12 have had as much as one year of normal-school training after completing the high-school course. About three-fourths of the teachers have had practically nothing more than high-school education, or less.

The average term of service in Wheeling is 14.3 years, while the total average experience is 16.1 years, which is very much above the average. This degree of per-

tenure would be a commendable feature if the teachers were adequately trained; as it is, the children of Wheeling do not have the advantage of teachers who have had good education and adequate professional training for their work.

#### HIGHER STANDARDS OF TEACHING ESSENTIAL.

The teachers in the Wheeling elementary schools need training first, and then inspired, intelligent guidance from principals and supervisors.

No new teacher should be employed in the elementary schools who has not had a minimum of two years of professional training beyond graduation from a standard four-year high-school course. Teachers now in the system should be given a reasonable period, say, five years, in which to meet the new standards. To assist them, study classes for teachers should be organized, including possibly extension courses from near-by educational institutions.

Teachers should be required to continue professional growth and development, but endeavor along such lines should be recognized. They should be permitted to visit other schools at least one week each year. Equal salaries for equal ability, training, and experience should be paid throughout the system. The teaching staff should not be recruited entirely from Wheeling.

#### LACK OF SUPERVISION.

There is much confusion of authority in the present plan of supervision; in general, no one seems to know just how much authority he has or whence it comes. The superintendent attempts to visit each teacher five times each year, but visits possible on this plan must be short and perfunctory. Principals are expected to visit 30 minutes each week in each teacher's room; but this is not regularly done, and such visits as are made are rarely followed by conferences. The time of principals is too largely taken up with routine office work, and they are handicapped by lack of clearly defined authority in their own buildings. Practically all of the principals are able school men and women, capable of wise exercise of supervisory authority.

The special supervisors in physical training and drawing are in reality special teachers, and in some instances are able to secure very little cooperation from the classroom teachers.

#### LINES OF AUTHORITY SHOULD BE CLEARLY DEFINED.

The present chaotic condition of the supervisory scheme in Wheeling calls for complete reorganization.

The superintendent should deal with the classroom teachers through the principals and supervisors. The principal should be held responsible for the work of his school, and should be given full authority, under the superintendent, in the administration and supervision of his school.

A special supervisor should be appointed for the primary grades. The supervisors of special subjects, as music, drawing, etc., should probably give more time to directing and assisting the activities of teachers, teaching themselves only for demonstration and when the regular teachers are not prepared.

The relations between special supervisors and school principals must be carefully defined. Better cooperation is needed.

A bureau of tests and measurements should be established as an aid to the supervisory and teaching force.

#### STATUS OF THE SCHOOL PRINCIPAL.

The chief function of the principal should be supervision of instruction, and he should be professionally trained for this important work. The principal should be assigned the duty of conducting teachers' meetings for the discussion of school prob-

lems; he should have authority to assign school duties to his teaching staff within prescribed limits; he should nominate teachers for confirmation by the superintendent.

#### GENERAL MANAGEMENT OF SCHOOLS FAULTY.

The classification of pupils in the schools is faulty, as evidenced by the wide range in scores in the various tests, and by the presence of unduly large proportions of pupils who are too old for their grades.

The system of promotions is unsatisfactory, in that a grade below 60 in a single subject sometimes forces a pupil to repeat the work of an entire semester. The plan of having coach teachers is to be commended, but as applied in Wheeling it is ineffective and unsuccessful.

A bureau of tests and measurements should be organized to secure the data upon which to base a modern scheme of classification, grading, and promotions, to the end that children of nearly equal ability and attainments may be placed together. Defective and subnormal children should receive special attention. The coach teachers should be specialists, trained in methods of dealing with backward children.

### VIII. PHYSICAL EDUCATION, HEALTH SUPERVISION, HEALTH TEACHING.

Public schools should educate for health, vigor, and sanity. The physical education, medical inspection (health supervision is a better term), and health teaching already established in the Wheeling schools are substantial elements of a program for promoting these objectives. The development of this program is hindered by inertia in the school system and in the public, by unsatisfactory school plants and, perhaps most important, by lack of coherent and effective administrative organization of the schools as a whole.

#### HEALTH EDUCATION SHOULD COORDINATE MANY ACTIVITIES.

1. Develop the beginnings that have been made in physical education, health supervision, and health teaching into a consistent, complete, and coordinated program. Ultimately it may be desirable to combine these activities into a single administrative unit. For the present the physical education and the health supervision should be developed separately, but in logical and helpful coordination. Health teaching, of necessity, is a divided responsibility and must be developed in connection with physical education, health supervision, and, in the higher grades and in the high school, with such subjects as home economics, biology, and civics.

2. Develop the program of physical education along the lines already laid down, including coordination with community recreation. Make the director of physical education responsible to the superintendent of schools not only for the conduct of his department but also for the selection of his assistants. Appointments should be made only upon his initial recommendation, approved by the superintendent. Develop plans already initiated for preparing teachers in service to take adequate part in the physical education program. See that "classroom physical training" conforms to hygienic principles; and, as conducted only in well-ventilated rooms; exercises chiefly recreative; needs of individual pupils recognized.

3. Provide a clean, well-lighted and well-ventilated exercise room and a minimum of 20 square feet per child of actual playground space for each school. Provide, further, a sufficient number of well-located district playgrounds, large enough to insure for the children and young people of each district such vigorous outdoor games as

soccer, baseball, and field and track sports. The new public-school athletic field provides for city-wide competitions and exhibitions, but is not a substitute for local district playgrounds.

4. Provide for one full-time director of the department of medical inspection directly responsible to the superintendent for the administration of this department. His duties should include the communicable disease work of the schools, health examination of pupils, supervision of the nursing service, sanitary supervision of school plants, supervision of special classes for subnormal and handicapped children, promotion of hygienic school management, and, in general, supervision of all school conditions affecting the health and growth of pupils. The amount, variety, and thoroughness of work involved will require the full time of a competent man.

Expand and improve the health examination procedure, provide complete examination for all children entering school, all malnourished children, those suspected of tuberculosis or organic troubles, those engaging in competitive athletics. The examination should include the mental status of pupil and the nervous and emotional factors that condition health.

#### ADEQUATE RECORDS ESSENTIAL TO EFFICIENT WORK.

Improve the recording and the reporting. Make the records more effective as aids to follow-up work with individual children and as means of analyzing and evaluating the work performed. The periodic statistical reports now made are of little value except for filing. Provide for an annual, analytical report showing scope of activities, achievements, obstacles in the way of achievement, and presenting recommendations for improvements. There should be periodic reports covering urgent matters.

The school nurses are doing very valuable work. Their energies might be conserved, and even more effective work would be done, if the objectives of the nursing service were better defined, and if there were more systematic guidance and supervision of the nurses. The mutual responsibility of nurses, principals, and teachers should be more clearly defined. It is desirable ultimately that there should be a nurse in every school.

The director of medical inspection, under definite regulations, should be responsible for the hygiene of school buildings.

The respective duties and responsibilities of the medical inspector, nurses, principal, teachers, and janitors should be defined. The director should be required to report promptly and accurately upon urgent matters, and the board should lay upon itself the duty of acting promptly upon his recommendations.

#### SUBNORMAL AND HANDICAPPED CHILDREN A SPECIAL PROBLEM.

At present there is no provision for the special education of subnormal and handicapped children, such as anemic and tubercular children, the speech defectives, the cripples, the deaf, the semiblind, and the mental subnormals. A careful survey should be made under the direction of the medical inspector to determine the number of children requiring special education. The nutrition classes should be increased to include malnourished children.

5. The experimental work of the nurses in health teaching should be encouraged and developed. The nutrition classes, both formal and informal, the health talks given by the nurses in connection with their periodic inspections, the inclusion of the weight record in the pupil's monthly report and other methods are stimulating interest in health and the practice of health habits by pupils. An effective program of health teaching may be developed through the leadership of the nurses. It must be recognized, however, that health teaching is not an exclusive function of the nurses. On the contrary, it is an essential part of the work of every teacher. Time should be provided in the schedule, and all teachers should be prepared for this work.

### SPECIAL PROBLEMS OF THE HIGH SCHOOL.

6. The administrative responsibility of the principal of the high school should be clearly defined. There should be clear and specific regulations governing his responsibility to the superintendent, and his relationship with the director of physical education, medical inspector, supervisor of nurses, and the director of home economics.

The present plan for administration of physical education including athletics should be maintained and strengthened.

The physical-training program in the high school, though correct in principle, should be modified on account of unfavorable physical facilities and the exigencies of the program. This is especially true with respect to the girls. If possible, reorganize the program so as to provide two double periods a week for each class instead of five single periods and place all physical-training classes in the two periods just prior to the noon recess and the two periods just prior to the close of school. The loss of the daily period of exercise would be compensated by the better observance of hygienic considerations.

Put into effect the recommendation of the director of physical education for the reconstruction for the boys' locker rooms, toilets, and shower baths. Study carefully the matter of providing better facilities for the girls.

There is no prescribed health teaching for the boys. Some incidental instruction is given in connection with physical training. This should be developed and systematized. For the girls, health instruction is involved in three required subjects—physical training, home economics, and home nursing. Health teaching in a high school is necessarily a divided responsibility. The special part to be played by each of these agencies should be worked out, and a coordinated program adopted. Furthermore, there should be some plan devised whereby the composite program may be carried out with mutual understanding and cooperation.

## IX. HOME ECONOMICS.

Home economics instruction is well established in the white schools, and conditions are favorable for continued development. In accordance with best practice, special teachers are employed, special rooms and equipment are provided, and the supervisor has opportunity and authority for supervision; hence, a united and well-organized staff of teachers.

### WEAKNESSES IN PRESENT SCHEME.

- (1) The course of study is too narrow; insufficient attention given to problems of food and clothing in the home and relative to home budgets, home sanitation, personal accounting, social significance of the home and home making.
- (2) The course of study is uniform throughout the city, and hence no special consideration is given to varying home conditions, needs, and environment.
- (3) The time allotment in grades 5 to 8, inclusive, is inadequate.
- (4) The work suffers from the complete lack of handwork in the earlier grades.
- (5) Special attention should be given to home economics instruction for over-aged girls in grades below the sixth.
- (6) The course in home nursing as now given in ninth grade should be modified so as to emphasize conditions of health rather than of illness and disease, and amount of lecture work should be materially reduced.
- (7) Food work should be carried beyond individual quantities and recipes, and connected more vitally with home problems.

- (8) Sewing problems should be more varied, interesting, and adapted to pupil and home needs.
- (9) Walking distances between schools and home economics centers are too great in some cases.
- (10) The equipment is not sufficiently varied.
- (11) Storage facilities for home economics materials and supplies are badly needed.
- (12) Rooms are needed for instruction in various phases of home management.
- (13) There is a singular absence of illustrative and reference material.
- (14) Laboratories are unattractive.
- (15) Teachers' schedules require much useless travel about the city.
- (16) School lunch rooms are badly needed, and should be under the supervision of the home economics department.
- (17) Home economics instruction has too little practical outcome in the lives and habits of the pupils. There should be an adviser of girls, cooperating closely with the home economics department.
- (18) Special provision should be made for children suffering noticeably from malnutrition.

#### **SPECIAL IMPORTANCE OF HOME ECONOMICS IN THE COLORED SCHOOL.**

Home economics in the colored school has many additional handicaps. The room in which it is taught is not suitable for the work; the equipment is poor and inadequate; the arrangement of equipment is inconvenient; the teaching force is insufficient, even though the pupil enrollment is small.

Many Negro children are retarded; the student mortality is high; the occupations open to colored girls are limited almost entirely to household work of some kind, or to work in industries derived from household activities; hence, the home economics courses should be especially well organized, the equipment should be good and approach good home conditions, and the teaching vigorous. Additional time should be scheduled for home economics for colored girls.

The present attempt to furnish hot lunches should be encouraged and special provision made for serving hot food.

Until such time as a new building is secured for the colored school, the home economics department should be moved into a portable building, which, probably, should be located above the present building. This portable building should be well equipped and supplied with modern household equipment, such as should be found in American homes.

#### **X. MANUAL TRAINING AND VOCATIONAL EDUCATION.**

The Wheeling schools are to be commended for the splendid work which is being done in manual training and vocational training within the limits thus far set us. Evidence of a praiseworthy professional spirit is found in the weekly meetings of the supervisor and the entire staff enrolled in an extension course of study and discussion under the auspices of the State university.

#### **THE NEXT STEPS FORWARD.**

- (1) Among the improvements to be made probably the first should be to plan a scheme of handwork for all boys and girls, beginning with the lowest grade, and coordinated with the shopwork, drafting, and home economics of the upper elementary and high-school grades.

(2) The problems and projects now in use are in some cases not well adapted to the interests and capacities of the boys.

(3) A splendid variety of shop experiences is available in the high-school building. Few cities in Wheeling's class offer more. Nevertheless, the shops are badly crowded. If the high-school attendance were as large as it should be these facilities would be wholly inadequate.

(4) The adoption and carrying out of a junior high school program will make possible the establishing of additional centers offering equal variety to greatly increased numbers of pupils.

(5) The department already has the beginnings of equipment for additional shops (machine shop, printing), which can not be utilized until more spaces available.

(6) Provision should be made as soon as possible for a shop for automobile mechanics.

#### PART-TIME CLASSES NEEDED.

(7) As soon as facilities can be provided steps should be taken to establish a scheme of part-time classes for employed boys and girls. The preparation of plans and the immediate direction of this work may well require one-half or more of the time of one person.

(8) A serious weakness in the present situation is the lack of clearly defined relationships between this department and the school system as a whole, and between the special teachers and the school principals. This should all be cleared up in the general reorganization of the school system discussed elsewhere.

(9) In general, the special teacher should be responsible to the principal in matters of discipline, program, disposition of pupils, use of building, etc., and responsible to the supervisor in matters of methods of instruction, content of course of study, etc. Cooperation, however, is what is needed.

(10) One of the most difficult places to fill in the school system is that of the special shop teacher, which requires all the teaching ability and knowledge of child development that any other teaching position does, and in addition demands the mastery of at least the fundamentals of some technical field, as woodworking, printing, pottery, etc. The teaching staff in Wheeling compares favorably with that of other cities, but needs strengthening on the side of professional preparation and teaching skill. The study class, referred to above, if properly encouraged, should do more to improve conditions in this respect.

(11) Provision should be made for more definite vocational guidance service for boys and girls who need it, and for sympathetically following up all boys and girls in their after-school careers, whether they graduate or not.

#### CLOSED COORDINATION WITH REGULAR SCHOOL WORK NEEDED.

(12) A more sympathetic attitude toward manual training and vocational work on the part of teachers and principals might result after a more careful consideration of the small proportion of children who complete the school work as now laid down, and who go on to high school and college, and the reasons therefor.

(13) There is at present too little understanding of each other's work by both regular and special teachers and almost no vital connection.



## XI. ART EDUCATION.

### DEPARTMENTAL TEACHERS RECOMMENDED.

- (1) Change the present system of supervising the grade teacher to one of special teachers under the departmental system. One special teacher of art can take care of 16 grade rooms, allowing 2 lessons per week of 40 minutes each, and produce a more acceptable type of work than can be hoped for with supervision.
- (2) Employ an art teacher for the high school who would be responsible for the teaching in the departmentalized grade rooms, or

### ALTERNATE PLAN POSSIBLE.

While keeping the present arrangement, make more effective supervision of art through:

- (1) The supervisor of art in the grades should supervise and not teach.
- (2) A printed schedule of the supervisor's visits should be sent in advance to each teacher and principal.
- (3) This schedule should be followed.
- (4) The lesson should be given on schedule time by the grade teacher without waiting for the supervisor.
- (5) Lessons completed since the supervisor's last visit should be ready for inspection.
- (6) The lesson should proceed in charge of the grade teacher, unless special help is needed.
- (7) A schedule of teachers' meetings should be published in September.
- (8) The supervisor of drawing should be informed as to the content of the other school subjects.
- (9) Keep a card index record of the talented pupils as they are discovered in the grades.\*
- (10) Raise the standard of the grade teacher:
  - (a) Employ only such teachers as have had during the normal-school course training in art and art teaching.
  - (b) Ask that a certain number of teachers now in service take summer-school work in art and the methods of teaching art.
  - (c) Require attendance at teachers' meetings conducted by the supervisor.
- (11) Employ a teacher of art for the seventh, eighth, and ninth grades and high school.
- (12) Employ a supervisor of industrial arts for the first five grades.

### FINE ARTS COURSES FOR THE HIGH SCHOOL.

- (1) Introduce the course in the ninth grade.
- (2) Make provision for at least three different courses of art in the high school:
  - (a) General course (one or two years): Art appreciation and history. Minimum amount of studio practice work in color, design, crafts, art photography, picture study, and history of art. For girls, the work in design should be applied to the home and the person; for boys, it should connect with the manual training and pottery departments.
  - (b) Elementary drawing: Drawing in pencil and charcoal from objects. Lettering—this course should attract the students who will enter the normal schools and the teaching profession.

\* This system of studying the progress of students of unusual ability has recently been put in force in the Pittsburgh public schools by Mr. James C. Boudreau, supervisor of art.

(c) Advanced drawing: Charcoal, poster design, illustration, title-pages, headings for the school publications. This course for future art students only.

The first year that an art course is offered it may be well to begin with the general course, which should, because of its scope, attract all students interested in the subject.

#### A CIRCULAR OF INFORMATION WOULD BE HELPFUL.

(1) A printed course of study in art education should be prepared, containing information as to:

- (a) Psychology of the subject.
- (b) Scope and aims in public school system: Appreciation, expression.
- (c) Standards of attainments.
- (d) Methods of presentation.
- (e) References to standard texts.
- (f) Supplies and materials.

(2) Copies of these outlines should be furnished to each principal, as well as to each teacher.

(3) Illustrated charts showing the progressive steps of type lessons should be placed in some building or room centrally located in the city for the use of the grade teachers.

#### INFLUENCE OF THE ART DEPARTMENT ON BUILDINGS AND GROUNDS.

(1) Employ expert advice on the subject of interior and exterior decoration:

(a) The selecting of color for the walls of the rooms, halls, and corridors, with special attention to light and durability as well as color.

(b) Place in each classroom bulletins or display boards to be used in exhibiting class work in penmanship, writing, arithmetic, drawing, etc. Through teachers' and principals' meetings, formulate definite rules consistent with good design to govern the use of such boards, and thus prevent a haphazard pinning of papers and pictures to any available woodwork.

(c) Supply each classroom with a few pictures appropriate to the grade and age of the pupils, and eliminate such pictures as are too small to be easily seen by the majority of the class. The principal of the building, the supervisor of art, and the grade teachers should work in harmony to secure the best for the building, and work out a scheme for decorating the corridors with the classroom work of exceptional pupils.

(d) Supply aisle boards for the display of groups of objects for drawing.

(e) Children in the grades should be supplied from the school funds with water-color boxes and brushes.

(2) Place in each building a small library of books on art and on art education.

#### ART EDUCATION AND THE COMMUNITY.

(1) Secure exhibitions of original examples of fine and industrial arts work and arrange for classes to make special trips to the exhibitions under the guidance of the grade teachers.

(2) Pictures of examples of architecture, sculpture, and paintings now in Wheeling should be made available for study.

(3) Cooperation of the teachers in the grades of bench work, pottery, domestic science, principals of the schools, and the librarian should be sought to perfect a more solid school organization.

## XII. TANGIBLE RESULTS OF THE SURVEY.

At least two definite actions of the board of education, growing out of consideration of the recommendations of the survey report, may be recorded:

### REORGANIZATION OF THE BOARD OF EDUCATION.

At a meeting of the board held March 29, 1921, a series of resolutions proposing amendments to the legislation under which the Wheeling public schools are now operating were adopted, in accordance with which the number of members would be reduced from 21 to 5, effective in June, 1923, the earliest possible legislative date at which the changes can be made.

On March 30, 1921, the president of the board of education wrote to the Bureau of Education, as follows:

After a series of meetings and conferences the board finally passed the amendments to the bill prepared by the Rotary Club, Kiwanis Club, and chamber of commerce, which provide for the election of five commissioners at large at the city election of 1923, the term to be six years. At the first election two will be elected for six years, two for four years, and one for two years, and the election is to be nonpartisan and candidates arranged in alphabetical order. The other provision is that the superintendent shall appoint all principals, teachers, and other employees of the board, subject to confirmation by the board.

At a meeting of the joint committee of the above organizations held yesterday these changes were approved unanimously by the members present, so that the bill as now amended goes to the legislature without contention.

### QUALIFICATIONS OF TEACHERS.

On Friday evening, July 22, 1921, the board of education adopted the following resolutions:

In order to carry into effect the recommendation of the survey commission with respect to raising the standards of qualifications of the teaching staff, the board of education of the school district of Wheeling hereby adopts the following resolutions:

*Resolved*, (1) That hereafter all principals, supervisors, directors, teachers, librarians, nurses, clerks, janitors, and other employees (except the clerk of the board) shall be employed, promoted, demoted, transferred, retired, or dismissed, exclusively upon the written recommendation of the superintendent of schools, subject to the approval of the board.

(2) That after July 1, 1921, no new teacher or supervisor shall be employed for service in the high schools who is not a graduate of an accredited four-year college or university course, except that teachers or supervisors in special technical subjects may offer successful experience in the vocations related to such subjects in lieu of two years of such college or university course, provided two years of approved professional training beyond high-school graduation be offered.

(3) That after July 1, 1921, no new teacher or supervisor shall be employed for service in the elementary schools who is not a graduate of an approved normal school or teachers' college course consisting of two years' work beyond graduation from a standard high school, or, in the case of special trade subjects, who has not had the equivalent of two years of professional preparation for teaching or supervising the subject in question.

(4) That after July 1, 1921, to be eligible for a new appointment as principal of a school a candidate should meet the minimum requirements herein set forth, and in addition should have had not less than five years' successful experience in teaching, and have completed an approved course of professional preparation in school administration and supervision.

(5) That in the cases of all principals, teachers, and supervisors who were employed in the Wheeling public schools during the year ended June, 1921, and reappointed for the ensuing year, the application of the minimum requirements as herein set forth be waived until September 1, 1927; and that the superintendent be directed to report on the professional qualifications of all principals, teachers, and supervisors at the regular meeting of the board in September of each year.

(6) That after July 1, 1925, no person shall be employed for substitute service who does not meet with the minimum qualifications of regular teachers as set forth in this resolution.