

UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, *Secretary*
OFFICE OF EDUCATION
WILLIAM JOHN COOPER, *Commissioner*

BIBLIOGRAPHY
ON
EDUCATIONAL FINANCE
1923-1931

By CARTER ALEXANDER
and TIMON COVERT



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NOTE

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LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
OFFICE OF EDUCATION,
Washington, D. C., June, 1932.

SIR: One of the first tasks to which the staff of the National Survey of School Finance turned its attention was the preparation of a bibliography in the field of school finance to supplement the thorough-going job done by the Educational Finance Inquiry a decade ago. Every effort was made to speed this work because of the needs of the survey staff. Because of the value of such a bibliography in stimulating research workers in the field, it was considered desirable to publish the bibliography as soon as it was reasonably complete and to supplement it from time to time during the life of the survey.

This work has been done by various members of the survey staff under the general direction of Dr. Paul R. Mort, Associate Director of the survey, and under the immediate supervision of Dr. Carter Alexander, Teachers College, Columbia University, and Mr. Timon Covert, specialist in school finance, United States Office of Education. The bibliography is now ready for publication. Considering the limitations of time which have been placed upon the organization of the vast number of references relating to school finance, these men have been able to bring together in record time materials which promise to serve a most useful purpose to educational workers throughout the country.

I recommend its publication as a phase of the work of the National Survey of School Finance.

WM. JOHN COOPER, *Commissioner.*

The SECRETARY OF THE INTERIOR.

FOREWORD

This bibliography, conceived as one of the earliest undertakings of the survey, does for the materials published from 1923 to 1931 what the Educational Finance Inquiry's bibliography¹ did for the earlier years. In addition it lists some good mimeographed materials and some unpublished references whose titles seem promising. The time limitations and tremendous growth of the literature of the field, however, have made it impossible to cover all references as thoroughly as in the earlier work. Annotations and references are less complete for the same reasons.

Like the earlier bibliography, this one aims to stimulate school executives and research workers to progress in financing education. In a way each heading in the bibliography represents one or more problems in school finance. Nearly every important heading opens and plainly marks new and easy highways to representative data, ideas, statistics, and descriptions of practice essential for sound solutions of the problems involved. Accordingly the bibliography endeavors to include only usable materials. It makes no effort to provide under a given head all the references which a specialist working in that one field for the time expended on this whole bibliography could assemble.

The very fact that some headings have a paucity of materials is a challenge to school finance men everywhere. For every such empty place means that very little has been done in that field to put it on a sound financial basis. Until the financial aspects of any phase of education are sufficiently understood and controlled, it can never hope to become an integral part of the accepted educational program, public or nontax-supported. The vacant headings therefore offer rich opportunities for exploration. Every such study of merit should be promptly published or at least circulated in mimeographed form.

For the library facilities necessary for the undertaking, the bibliography workers are indebted to the library staffs of the United States Office of Education, of Teachers College (Columbia University), and of the Library of Congress. All three staffs cooperated heartily at all times and expended much energy to make the project a success. The completeness of a number of sections of the bibliography could not have been attained without the help of the Bureau of Educational Research Library at Ohio State University. The Director of the Bureau, Dr. W. W. Charters, and his staff, generously permitted the survey workers to copy hundreds of references from their exceptionally useful card files. The completeness of the State lists is largely due to the help of State department staffs

¹Alexander, Carter. *Bibliography of Educational Finance*. Educational Finance Inquiry, Vol. IV. New York, Macmillan Company, 1924. 257 pp.

and of the university professors who checked and extended the preliminary lists assembled at headquarters for their respective States. Of these men, Prof. F. H. Swift of the University of California, N. B. Trenham of the California Taxpayers' Association, and Dr. M. C. S. Noble, jr., director of research and statistics, North Carolina State Department of Education, rendered unusually valuable aid.

The closing date for regular references was September 1, 1931. Some outstanding references published after that date are included, but complete service on materials since then has been impossible. Space and time limitations have made it out of the question to do much with four distinct kinds of valuable materials: (1) Official routine publications which will readily come to the mind of any serious investigator; (2) references on historical phases; (3) titles on foreign educational finance; (4) unpublished theses submitted for graduate requirements at universities.

Such annotation as occurs would have been largely impossible without the aid of previous bibliographies and annotations. The magnitude of the work and the speed required has made footnote acknowledgment or quotation marks on all borrowed sentences out of the question. Indebtedness in this matter is here acknowledged, once and for all, to many sources, especially to the bulletins of the United States Office of Education, of the National Education Association, and of the University of Illinois Bureau of Educational Research. On the annotating done from the documents themselves, Mr. Gordon McCloskey, of the survey staff, rendered an important service in addition to the work of filing and indexing.

The arrangement and cross-indexing of materials have received special attention. These will expedite the work of the educational executive and investigator when searching for important materials on almost any problem of educational finance, and from various angles of approach. Since improvement in school finance in most cases involves legislation in some States, all references to a particular State are listed under the State's name, even if this results in duplication. A man interested in improving schools in a given State ought to see its school-finance problems as a whole. The listing by States will greatly facilitate his attaining this overview.

The problem of editing for literary form has been exceedingly difficult. Because of the variety of sources and time limitations, uniformity has been impossible. To improve this editing materially would be exceedingly laborious, time-consuming, and costly, while adding little or nothing to usefulness. It accordingly seemed preferable to issue the bibliography after a reasonable effort at uniformity. The material will thus be available months or a year before a highly meticulous and expensive editing would have permitted publication.

HOW TO USE THE BIBLIOGRAPHY

Look in the Table of Contents for some likely general head, or under States, individual, if references are desired for a particular State, then turn to the indicated pages in the bibliography proper. After several instances of such use, headings at the tops of pages will become serviceable as a rough index.

HOW TO SECURE COPIES OF MATERIALS

The place of publication is indicated in connection with each reference as far as known, except for periodicals and well-known publishers. The full titles and addresses of educational periodicals can be obtained from the proper section (U. S. Office of Education, Bulletin, 1931, No. 1, pp. 163-71) of the directory of the United States Office of Education. The Education Index, H. W. Wilson Co., University Avenue, New York City, gives the title and also the addresses and publishers of books. The publishers can also be located easily through any book store. Where the printer and place of printing have no significance, the reference gives instead the person from whom copies may be obtained.

Many of the documents issued by public education authorities are free. Many of the materials can be borrowed from the libraries of State universities, State historical societies, the United States Office of Education, or the Library of Congress. Probably no one library has anything like all the documents referred to in the bibliography. In writing for mimeographed materials and other documents, the supply of which is likely to be exhausted shortly, it will be advisable to request information as to the location of the nearest known copies to you, in case no copy can be sent you from the original supply.

CARTER ALEXANDER.

BIBLIOGRAPHY ON EDUCATIONAL FINANCE, 1923-1931

ACCOUNTING, SCHOOL

COST, GENERAL

[For accounting for any particular item, e. g., Pupils or Fire Insurance, see that item]

DALY, R. L. Public-school cost accounting. In National association of public school business officials. Proceedings, 1930. Trenton, N. J., Harrison press, inc., 1930. p. 120-32.

Outlines specific methods for school financial accounting and defines classification headings for expenditure and receipts.

FROSTIC, F., and LOVEJOY, P. C. Variables in comparative public-school cost accounting. *Nation's schools*, 6: 68-75, July 1930.

In measuring efficiency by comparative costs and in determining educational cost, the nature and influence of variables (49 given) must be considered. Business procedures used in industry can not be carried in their entirety into the field of education, because actual costs in education must be determined only in terms of permanent values acquired by the child.

LAMBERT, A. C. Useful units for making analysis of school costs. *American school board journal*, 80: 65, May 1930.

Attempts to clear up misunderstanding concerning cost-units. A unit-cost is some division or multiple of a service or a material used in the school system stated in terms of dollars expended. It is made for a specific purpose and is difficult to determine satisfactorily. No one unit can serve all purposes. Validity, reliability, and objectivity are requisite factors. The studies made should be multiple and the results obtained by one specific unit illuminate the results obtained by applying other units.

MATZEN, J. M. Codification of expenditures for school supplies. Masters Thesis, 1928. Available from the University of Nebraska Library. Lincoln, Nebr.

Also published in Educational record (University of Nebraska publication) 4: 1-4, October, 1931.

MORRISON, HENRY C. The cost sheet. In his The management of the school money. Chicago, Ill., University of Chicago press, 1932. p. 391-445.

A stimulating theoretical treatment with practical applications and forms.

Views the cost sheet as a "method of thinking and not a mere exhibit," to be used "in inferring from the data and analyses whether every classified service and every instructional function is carried at the level of minimum cost consistent with maximum efficiency."

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Why have city school costs increased? Washington, D. C., National education association, 1924. p. 11-14. (Research bulletin, vol. 2, nos. 1-2, January-March 1924.)

A technical and descriptive article investigating and comparing the statistics of school costs for 1913 with those of 1923. The research reveals and analyzes the statistics of five factors contributing to increased costs of city schools, namely, increased attendance and expansion of school service, a rising proportion of school population attending secondary schools, public and social demand for better teachers, depreciation of the dollar, and acceleration of building programs retarded during war. Tables and graphs supplement the statistics and discussion.

PITTENGER, B. F. Financial records and reports. In his An introduction to public-school finance. New York, N. Y., Houghton Mifflin co., 1925. p. 125-51.

Discusses the deficiencies of contemporary financial accounting in schools; the objectives, qualities, and essential parts of an adequate accounting system. Systems that have been proposed by experts or tried and used successfully in the field are given, as well as advantages that may be expected to follow the use of an up-to-date accounting system.

RAINEY, HOMER P. Public-school finance. New York, N. Y., Century company, 1929. Chapters III, IV, and V.

These chapters divide costs into current operating costs and capital costs, and discuss the technique and application of cost accounting. Items of school expenditures are listed in detail and classified. Depreciation and capital reserve theories are analyzed and the need for scientific and uniform cost accounting is explained. Practical applications of uniform accounting to a comparative study of school costs.

VELTE, C. H. Codification of expenditures for school service. Master's thesis, 1929. University of Nebraska, Lincoln, Nebr., Library.

WEATHERHOGG, JOHN. Codification of expenditures for school equipment. Master's thesis, 1928. *University of Nebraska, Lincoln, Nebr., Library.*

WHITING, EDWARD T. Codification of school expenditures (controversial items). Master's thesis, 1931. *University of Nebraska, Lincoln, Nebr., Library.*

ECONOMIES

HUNTER, FRED M. Efficient expenditures of school moneys. *American school board journal*, 76: 43-44, May 1928.

The chief causes of waste in city school administration are: Too large proportion of budget spent for overhead, failure to control distribution and assignment of teaching service, rapid expansion of fields of school service, exploitation for profit of business firms, extravagance in school buildings, positions for personal friends and political favorites. Efficient expenditure may be obtained through single-headed control, coordination in fields of activity, merit system for appointments, checking system on administrative assignments, a schedule for teaching positions, and a system of cost accounting covering all school activities.

KEMMERER, WALTER WILLIAM. School accounting by machine methods. Doctor's thesis, 1930. Columbia university, New York, N. Y. *Houston, Tex., Auxiliary directory company*, 1930. 178 p.

A means of discovering and making available the advantages which may be derived from the use of mechanical equipment in school accounting and related procedures. Data were secured from a personal study of 17 public-school systems, and from information secured by correspondence and other indirect means from 17 other public-school systems, all using mechanical accounting equipment.

GENERAL

BASKERVILLE, H. H. Public-school accounting system: abstracts. In National education association. Department of superintendence. Official report, 1931. *Washington, D. C., Department of superintendence*, 1931. p. 192-93.

To be efficient, accounting must be simple, adequate, and made to fit the school system and trend in educational requirements. Methods should provide for comparability, year to year, activity to activity, and school to school. Improvements in standardization are needed. Strictly business methods are essential. School officials have a fiduciary responsibility.

BELL, A. H. School accounting in the United States. *American school board journal*, 69: 47, October 1924.

A constructive criticism of the public-school accounting as practised in the

United States from 1913-1924. Urges uniformity in procedure for comparable cost figures so that data collected by the United States Office of Education at great expense may be useful and valuable. In this way the amount of education given for a stated sum can be accurately computed. Cites examples of wrong principles now in practice as to depreciation and depreciation reserve entries. States that the cost unit should be the pupil instruction hour.

BURCHARD, F. F. The school budget and school accounting. *North Dakota teacher*, 4: 10-12, November 1924.

CARNEGIE FUND FOR THE ADVANCEMENT OF TEACHING. The financing of education. In Carnegie fund for the advancement of teaching. Nineteenth annual report, 1924. *New York, N. Y., Carnegie fund for the advancement of teaching*, 1924. p. 121-34.

CHAMBERS, J. L. Thirteen principles of public-school financial accounting. *American school board journal*, 82: 61-62, May 1931.

Deals with the 13 underlying principles of financial public-school accounting which can be applied to both city and State school accounting. An appropriate illustration, showing the necessity for the efficient operation of these underlying principles, is discussed. A treatment of the principles, instead of systems and forms of public-school financial accounting.

ENGELHARDT, FRED, and VON BOBESBODE, FRED. Accounting procedure for public schools. *New York, N. Y., Columbia university*, 1927. 130 p. (School administration series.)

Presents concisely a complete system of school accounting. Describes the voucher accounting system in detail and presents a codified classification for expenditures. Discusses problems of business administration, stores control and internal accounting. Accounting forms supplement the discussion.

ENGELHARDT, N. L. Financial records of a school system. *Washington, D. C., National education association*, 1927. p. 233-44. (National education association. Research bulletin, vol. 4, no. 5, 1927.)

Contains a complete list of financial forms for all phases of public-school accounting, accompanied by a brief discussion of their value and usefulness.

Adequate financial accounting for public schools. *School and community*, Columbia, Mo., 15: 113-15, February 1929.

A review of the purposes and values of school accounting, including a discussion of comparable unit costs, adequate fire protection, precautions against unnecessary debts, budgetary procedures, the safeguarding of school funds, and property accounting.

— and ENGELHARDT, FRED. Public-school business administration, *New York, N. Y., Teachers college, Columbia university, 1927.* p. 73-95.

Gives findings of different surveys regarding fiscal affairs, shows the effects of various forms of fiscal control on the finances of school systems, summarizes and points out the necessity for the administration of school systems by competent officials and for accurate and complete reports regarding fiscal affairs in order to bring about efficiency.

— Conditions affecting school accounting. *In their Public-school business administration. New York, N. Y., Teachers college, Columbia university, 1927.* p. 222-23.

Presents some conditions necessitating adequate and accurate accounts and accounting control. Much of the current school business is done on a credit basis. Calls attention to the fact that State aid is frequently delayed but the school budget often must be presented a year in advance.

Financial systems in relation to schools. *Sierra educational news, 20: 3-85, February 1924.*

FOWLKES, J. G. Allocating the operating expenses of a school system. *Nation's schools, 3: 67, March 1929.*

This study defines accounting and divides it into functional and fiscal bases. Functional bases: Administration, supervision, coordinate activities, and auxiliary agencies. Fiscal bases: Building operation, building maintenance, fixed charges, debt service and capital outlay. The author concludes that it is necessary to maintain these two fivefold bases of classification since money spent for either is logically aiding the other. Special accounts are kept to arrive at expense cost studies. May also be done by coding.

— Handbook of financing accounting for schools. *Eau Claire, Wis., Eau Claire book and stationery co., 1924.*

From the financial records of 15 Wisconsin schools for the year 1921-22, this pamphlet attempts to motivate more attention to scientific accounting of school moneys, or make such accounting easier and more reliable. Other States may derive some benefit from this edition.

— Viewing school costs in terms of school service. *Nation's schools, 8: 90, 92, 94, 96, September 1931.*

A method of putting school costs over a period of years on a uniform basis when length of term, cost of living, and pupil-teacher ratio varied. Illustrated with data from elementary schools of Glendale, Ariz.

HYDE, G. H. The need of school accounting and a suggested method. *South Dakota educator, 33: 248-49, March 1925.*

JOE, L. B., REEDER, W. G. and HECK, A. O. The school clerk and his records. *Bloomington, Ill., Public*

school publishing co., 1931. p. 22-74.

Stresses only those matters which experience and observation show have given school clerks most trouble; emphasizes methods of keeping of financial records and accounts of the board of education. Presents accounting forms and describes recommended procedures.

KIRK, H. H. A neglected aspect in uniform classification of school disbursements. *American school board journal, 72: 48, April 1926.*

Shows huge discrepancies in the cost percentages of various items of neighboring city school reports. Points out the need for a dictionary of accounting terms to simplify financial reports and to facilitate significant comparisons.

LEAVENWORTH, P. E. Financial statements as a means of control. *American school board journal, 78: 43-44, March 1929.*

Presents facsimiles of a balance sheet for control of school expenditures, and the outlines of a monthly budget control statement. These statements form an efficient means of checking current operations and directing the course of financial administration.

LINDSEY, E. E. Problems in school administration. *New York, N. Y., Macmillan co., 1928.* Chapter III.

Confusion and tardy development of present school accounting methods discussed. Points out the need of a standardized system. Includes illustrative forms, accounting problems, and a comprehensive bibliography.

MCGAUGHY, J. R. The superintendent's analysis of school finances. *Teachers college record, 26: 383-92, January 1925; 26: 660-70, April 1925.*

MERCHANT, E. Necessity for a detailed system of accounting in every school district. *In National association of public-school business officials. Proceedings of the nineteenth annual meeting, 1930.* p. 197-200.

Describes the values of detailed cost accounting and suggests methods and forms for use. Defends such accounting as a means of securing public confidence in the business administration of the school.

MOEHLMAN, ARTHUR B. Account terminology. *In his Public-school finance. New York, N. Y., Rand McNally, 1927.* p. 380-97.

Nine big items which make up the total appropriations for schools are synchronized in terminology suggested and developed by the United States Office of Education. Gives in detail the subdivisions of these nine major classifications.

— Making finance the servant, not the master of education. *Nation's schools, 8: 64-66, September 1931.*

The need of long-time budgeting and sound accounting considered merely as

agencies for carrying out the educational program which in turn should be considered as only part of the larger social program.

— Public-school accounting. In Review of educational research. Finance and business administration number, vol. II, no. 2, April, 1932. p. 90-104, 163-64. American educational research association. *National education association, Washington, D. C.*

Running review and bibliography of researches in this field, stressing those from 1923 to the fall of 1931.

— Theory of educational accounts. In his Public-school finance. *New York, N. Y., Rand McNally, 1927.* p. 103-17.

The theory of accounts in school finance is basically like that of commercial firms, but it differs in that it is not designed to show profit and loss, but only to indicate sources of revenue and purposes of expenditure. The article shows, also, the unit to be used in computing unit costs, and names the major divisions of public-school accounting, as maintenance, capital outlay, and debt service. An explanation is given as to what each includes, its subdivisions, and definition. The nomenclature suggested by the Office of Education is used. Financial forms are designated. Recommends that an audit of all books and records be made annually and that an internal accounting system of the lunch room, bookstores, athletic records, and entertainments be kept by the principal.

MORRISON, HENRY C. The fundamental accounts. In his The management of the school money. *Chicago, Ill., University of Chicago press, 1932.* p. 15-25.

Lists and justifies the major accounts and exhibits of concern to the school executive. Criticizes present systems employed, discusses the use of accounts for comparative costs and stresses their value for control of school policy.

MORSE, H. N. Simplified accounting system for small districts (figures). *American school board journal, 80: 100, February, 1930.*

Shows the need of detailed cost-statements in small districts for furnishing information to school boards, and in working out school housing and instructional programs. Divides bookkeeping into three parts: (1) Budget (in detail); (2) Receipts and Disbursements (divided into the legal classifications as required by statute in the State; (3) Distribution of costs (on a contractual basis). The New Jersey simplified accounting system plan embodies these features in a complete system. A plan so simple that any competent person may keep it, irrespective of a knowledge of bookkeeping.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. School records and reports. *Washington, D. C., National education association, 1927.* p. 226-350. (Research bulletin, no. 5, November 1927.)

PEEL, ARTHUR J. A new and practical accounting form for school board offices. *American school board journal, 71: 40, November 1925.*

The need of keeping records in school board offices in an adequate manner so that valuable information may be readily gained, is met by the suggested use of the cash-journal invoice and pay-roll register combined with two ledgers: (1) general—for revenues and expenditures for the school district, city or county. (2) school ledger for expenditures split up according to individual schools.

— Simplified school accounting. *American school board journal, 66: 37, February 1923.*

See also March p. 40, May p. 39, and June p. 55 of vol. 66, and September p. 41, October p. 47, and December p. 37 of vol. 67, and February p. 49 of vol. 68.

A series of eight articles, with facsimile illustrations, outlining in great detail an accrual accounting system for city school systems, 1923. Original records and books of original entry. School revenues classified by source and other information required relative to income and school expenditures, their function, character, object; ledger accounts, their purpose and value; cost accounts method of operation and information available; school budget and appropriations; simple and effective methods for the control of expenditures; monthly and annual reports. The system provides for a distribution of all expense at the time such expense is contracted.

— Simplified school accounting. *Milwaukee, Wis., Bruce publishing company, 1925.* 118 p.

Compiled from an extensive research, and a comprehensive bibliography, which is appended. Examines the philosophy and economy of a simplified and uniform accounting system, sets up the data forms, and organizations needed for effective administration, and lists specific methods and forms by which the various accounting requirements of school systems may be met in a simple and uniform manner.

REEDER, WARD G. Accounting. In his The business administration of a school system. *Boston, Mass., Ginn and company, 1929.* Chapter VI.

Discusses the deficiencies, purposes, and desirable characteristics of school financial accounting; notes and illustrates needed records and financial statements. Outlines types of unit cost studies and the requirements, principles, and procedures of internal accounting.

— Financial accounting. In his The fundamentals of public-school administration. *New York, N. Y., Macmillan co., 1930.* p. 515-29.

Discusses the essentials underlying the need for efficient accounting in public-school administration. Points out advantages of standardization in keeping school accounts. Presents necessary forms.

ROSEM, S. O. School accounting in 115 cities under 25,000 population.

American school board journal, 75: 53-55, September 1927.

SAUPE, W. J. Financial accounting practice in American city schools in cities over 10,000. Doctor's thesis, 1924. *Minneapolis, Minn., University of Minnesota*, 1924.

SMITH, HARRY P. Public-school accounting. In his *Business administration of public schools*. New York, N. Y., *World book co.*, 1929. p. 131-64.

An inclusive and general handbook written from research and experience, based on the practices of many cities. Incorporates a treatment and model organization for the business administration of practically every phase of a city school system. The book presents the philosophy and purpose of school existence, investigates the composition and organization of school boards and evaluates the various relationships of the school and the municipal government. It includes a survey of typical school budgets, discusses the provisions, preparation, and administration of budgets, discusses and evaluates methods of school financial accounting, lists basic principles and methods of insuring school property, presents fundamentals of building capital outlays, and publicity programs.

Uniform system of accounting. *American school board journal*, 72: 91-92, March 1926.

Value of an accounting system for school business costs. *Nation's schools*, 5: 54, June 1930.

WEBER, O. F. Accounting for the receipts and expenditures of money appropriated for public education in terms of educational service. In his *Problems in public school administration*. New York, N. Y., *Century company*, 1930. p. 497-581.

A theoretical and analytical treatment, based on problems, evaluating and questioning actual accounting and administrative forms and methods in terms of social philosophy and educational objectives. When solutions are offered they are suggestive and provisional only, but the data and the considerations offered afford a basis for many of the problems raised.

LOCAL SYSTEMS

Beloit, Wis. CAMERON, J. F. The Beloit system of school accounting. *American school board journal*, 71: 44-45, October 1925.

Des Moines, Iowa. BOARD OF EDUCATION. Statement of policies—Manual of business procedures. Records and accounts for junior and senior high schools. *Des Moines, Iowa, Board of education*, 1925.

Hamtramck, Mich. BOARD OF EDUCATION. Finance procedures of the Hamtramck, Mich., public schools.

Hamtramck, Mich., Board of education, 1928. 162 p. (Research series, no. 3.)

Describes in detail the accounting code, the accounts, the internal accounting procedure, the pay-roll procedure, the subject cost procedure, the service of supplies, textbooks and equipment, and the budgetary procedure used in the administration of the public schools in Hamtramck, Mich.

San Diego, Calif. TAXPAYERS' ASSOCIATION (report no. 200). Installation of accounting system in the San Diego city schools. Los Angeles, Calif., February 1932. 22 p. ms.

The design and the installation of a complete school accounting system on an accrual basis with provisions for budget control and inventory control.

STATE SYSTEMS

Indiana. A suggested school cost accounting system for township trustees. Thesis, 1925. *Bloomington, Ind., Indiana university*, 1925. p. 36-38.

JOB, LEONARD B. Uniform cost accounting in Indiana. *American school board journal*, 69: 42-44, 134, 136, 138, September 1924.

A pictorial and detailed description of how Indiana has taken the United States Bureau of Education accounting forms and applied them to her use in securing uniformity in method, terminology, and procedure. The Department of Public Instruction, with the aid of the State Board of Accounts, made the system compulsory.

ORR, L. F. Uniform accounting system for schools, cities, and towns. *Indianapolis, Ind., Indiana State board of accounting*, 1926. 41 p.

Iowa. MORRIS, EMMET L. Iowa's new uniform school accounting system. *American school board journal*, 74: 54, February 1927.

Describes in detail Iowa's new uniform school accounting system and presents facsimiles of the forms used. Iowa has a complete, comprehensive accounting and budgetary system of all public moneys from State departments and institutions down through the county and township organizations to municipal and school district corporations. The entire financial system is under the immediate direction of one Director of the Budget and his staff. The system is simple enough for practically all school secretaries to handle and its use will become easier each passing year. The general outline is not expected to change for years to come.

Michigan. MOEHLMAN, ARTHUR B. and others. A uniform financial procedure for the public schools of Michigan. (*Bulletin of the Michigan state teachers association*, no. 4 pt. 1, 1924.)

A well-organized presentation of a uniform financial accounting procedure pre-

posed in 1924 for all of the public schools of Michigan. Presents a method for preparing the budget, and analyzes it by the seven conventional divisions in general and in detail. Discusses cost accounting rules for a uniform procedure throughout the State and gives samples of the various blanks and forms that are essential for a uniform school accounting procedure and explains the proper use of each.

— STATE TEACHERS ASSOCIATION. A uniform financial procedure for the public schools of Michigan having a population of 2,000 or less. *Lansing, Mich., State teachers association, 1925*. 16 p. (Bulletin, no. 4. Pt. 2.)

New Jersey. CLOSE, EGBERT. A new system of school accounting for New Jersey. *American school board journal*, 68: 58, 123-24, 127, March 1924.

— STATE DEPARTMENT OF PUBLIC INSTRUCTION. A system for keeping internal school accounts in public school districts in the State of New Jersey. *New Jersey education bulletin*, 14: 49-54, October 1927.

— Report of the survey of accounting and business systems of the school districts in New Jersey. *Trenton, N. J., State department, of public instruction, 1923*. 46 p.

A brief survey report describing the systems of financial accounting found in the school systems of New Jersey in 1921. The survey investigated financial records, warrant books, vouchers, minute books, and bond registers. Tabulates the results in 32 pages.

— STATE DEPARTMENT OF EDUCATION. Teacher, pupil, and cost accounting. In Annual report of State board of education and of commissioner of education of New Jersey . . . for the year ending June 30, 1928. *Trenton, 1929*. p. 168-69.

Gives teacher and pupil cost statistics for the 535 school districts of New Jersey 1928. Includes statistical data on tax rates for school and other purposes, high-school costs, average and median costs per pupil in average daily attendance for books, supplies, supervision, and teachers' salaries, and a percentage analysis of expenditures for day schools. The various statistics cover a period of 4 years, 1925-28.

— STATE DEPARTMENT OF MUNICIPAL ACCOUNTS. An act concerning municipal and county finances. *Trenton, N. J., State department, 1924*. p. 4-5.

Ohio. REEDER, WARD G. Status of school budgeting and financial accounting in Ohio. In Ohio State educational conference. Sixth annual proceedings, 1926. p. 92-98. *Ohio State university bulletin*, vol. 81, no. 2.

Pennsylvania. A uniform accounting system for school districts. *Harrisburg, Pa., Department of public instruction, 1930*. 20 p. (Bulletin, no. 50.)

South Dakota. Uniform accounting system for South Dakota schools. *Pierre, S. Dak., Department of public instruction, 1931*. 37 p.

Reproduces forms of the accounting system, describes procedures for handling accounts, discusses classification of expenditures, and sets up a form for the preparation of school budgets recommended for use in all South Dakota public schools by the State superintendent.

Wisconsin. FOWLKER, JOHN GUY. The accounting of public school expenditures in Wisconsin. *Madison, Wis., University of Wisconsin, 1924*. 60 p. (Bureau of educational research bulletin, no. 4, November 1924.)

Uses the financial records of Wisconsin schools for the year 1921-22, to find out the present practice and then sets forth some standards for rating a State system of school accounting. Recommends the adoption of a careful, scientific, and uniform accounting procedure of school expenditures for States and local schools. Lists data in tabular form in great detail.

ADMINISTRATION

See also General Control

DAVIS, S. B. How improve the financial administration of schools? *American school board journal*, 80: 52-54, June 1930.

Improvements in administering the taxes voted in village and consolidated school districts are vital and rest with the superintendents. The school board is no longer the logical administrator because of the growing complexity of the modern school program and the lack of time and executive skill on the part of laymen.

MORRISON, HENRY C. Overhead. In his The management of the school money. *Chicago, Ill., University of Chicago press, 1932*. p. 315-59.

A stimulating theoretical treatment with practical illustrations of the problem of securing schools of maximum efficiency through proper executive and financial management.

TRENHAM, N. BRADFORD. School boards meet the depression. *The Tax Digest*, October, 1931, p. 348. *California Taxpayers' Association, Los Angeles*.

Summarizes methods being used in California, especially in Los Angeles, to meet the need for retrenchment. Points out that foresight might have been exercised by educators in prosperous years which would have diminished the impact of this depression.

WERNER, J. C. Financial problems in educational administration. *Pennsylvania school journal*, 77: 605-7, June 1929.

A list of eight problems which will test the ability and financial leadership of the school administration.

ADULT EDUCATION COSTS

ALDERMAN, L. R. Public education of adults in the years 1924-26. *Washington, U. S. Government printing office*, 1927. 26 p. (U. S. Office of education. Bulletin, 1927, no. 18.)

A rather general treatment of the progress made in the whole field of adult education, 1924-26, from the standpoint of the State departments of education, city school systems, colleges and universities. Data in tabular form by States. Discusses all types of adult education with some cost figures.

BISSELL, DWIGHT M. A study of financing adult education. Master's thesis, 1931. *Stanford university, Stanford, Calif.*

DEAN, A. D. Adults need educational funds. *Journal of education*, 112: 323, October 27, 1930.

ELLIS, A. C. Oldster's obligation; new psychological, social, and economic bases for adult education. *Journal of adult education*, 1: 262-7, June 1929.

SIMPSON, M. W. Adult education in Ohio. *Columbus, Ohio, State printing house*, 1925. p. 21. (State publication, vol. 17, no. 1, 1925.)

The extent and cost of adult education in Cleveland presented statistically. Few financial data.

SMITH, G. E. How much money is a board of education justified in spending on adult education, and what type of work may a board of education justifiably undertake? *National education association proceedings*, 1929. p. 289-93.

AGRICULTURAL EDUCATION

See also Vocational Education

FEDERAL BOARD FOR VOCATIONAL EDUCATION. Agricultural education. *Washington, U. S. Government printing office*, May 1930. p. 6-7, 11-12, 16-17, 23-24, 27-28. (*Federal board for vocational education*. Bulletin, 1930, no. 13.)

Outlines the general provisions of the National Vocational Education Act. Explains the distribution of funds under the act of 1917 and the George-Reed act of 1929. Gives financial means for the improvement of teacher service, and the costs and educational value of part-time and evening agricultural schools.

HAMLIN, H. M. Agricultural education. *Washington, U. S. Government printing office*, 1931. (U. S. Office of education. Bulletin 1931, no. 20, vol. I, chapter VII.)

A report made from data secured through the biennial survey of education in the United States, 1928-30. Gives tabulations of the enrollments and expenditures of Federal, State, and local money for agricultural education, trends for the period 1918-1930, and the financial recommendations of the land-grant college survey regarding agricultural extension.

Mississippi. BOARD OF VOCATIONAL EDUCATION. The minimum financial goal for agriculture project work in Mississippi. *Mississippi, Board for vocational education*, 1923. 8 p. Bulletin, 1923, no. 34.)

MORGAN, BERT E. Cost per unit of teaching high-school subjects in Iowa schools offering vocational agriculture. Master's thesis, 1929, *Iowa State college*. 100 p.

North Carolina. FEDERAL BOARD FOR VOCATIONAL EDUCATION. Factors to be considered in locating departments of vocational agriculture in the high schools of North Carolina. *Washington, U. S. Government printing office*, 1929. p. 13. (Monograph no. 7.)

Scattered data on salaries for 1926-27 in open country and village high schools.

Ohio. FIFE, RAY. The organization and financing of vocational education in agriculture for Ohio. *Washington, U. S. Government printing office*, April 1930. p. 20-21. (Federal Board for Vocational Education. Bulletin, no. 144, series, no. 37.)

A table showing a decade of progress (1918-1928) in the total amount of expenditures for vocational agricultural education in the State of Ohio through Federal, State, and local expenditures are possible by years for totals and also for total expenditures for high-school departments.

South Dakota. Vocational agriculture in South Dakota operating under the Smith-Hughes law. *State board of vocational education, Pierre, S. Dak.*, 1923. 60 p.

Texas. Vocational education in agriculture. *Austin, Tex., State publication*, 1929. p. 13-15. (Texas. Department of education. Bulletin, no. 253, vol. 5, no. 3, April 1929.)

Shows the influence of supervised practice in agriculture supported by public funds, in the State of Texas, and gives a list of successful agricultural projects with a complete financial state-

ment of their profits. Several projects in story form cover income and expenditure.

Wisconsin. CALLAHAN, JOHN. Statutory methods of establishing minimum standards for farm schools. *Wisconsin journal of education*, 58: 269-71, March 1926.

An explanatory list of 14 statutes enacted by the legislature of the State of Wisconsin prior to and including 1926, designed to establish and to maintain a minimum educational standard for various types of rural schools. Statutes provide special aid in regard to the quality of educational opportunity as it is related to the physical school plants, equipment, minimum school year, minimum requirements for the training of teachers, teacher turnover, pupil transportation, etc. An accompanying table shows the distribution of State aid to all schools for 1925.

WORKS, GEORGE A. Agricultural education. *Washington, U. S. Government printing office*, 1925. p. 8. (U. S. Office of education. Bulletin, 1925, no. 32.)

Using data secured at the College of Agriculture, Ithaca, N. Y., tables show the extent, trend, and costs of agricultural education in the elementary and secondary schools and the colleges of the United States, 1922-24. Tables supplement a philosophical discussion of the social and economic foundations of agricultural education, and the place of agricultural education in elementary and secondary schools and colleges.

Wyoming. Departmental costs in education in Wyoming in the twenty-nine schools offering work in vocational agriculture. *Wyoming educational bulletin*, 12: 1, 3, June 1931.

ALL-YEAR SCHOOLS

See Vacation Schools

ART

MOADORY, MARGARET. The cost and direction of art education in rural schools. *Journal of rural education*, 5: 451-54, May-June 1926.

An analysis of the relationship that art supervision bears to the administration in Jefferson County, Ala., at a per pupil cost for art supervision of 9 cents a year.

TANNAHILL, SALLIE B. Selection and cost of art materials for the elementary school. In *Fine arts for public-school administrators. Bureau of publications, Teachers college, Columbia university, New York City*, 1932. p. 74-75.

Annual cost in first six grades ranges in 15 school systems in different sections from 13 cents to \$3 per child. A few hints on economical materials.

ATHLETICS

COSTS

See also Athletics, Finance; Stadia

High cost of playing games. *Literary digest*, 91: 68-73, November 20, 1926.

Discusses the high cost of playing games in America, England, France, Germany, and South America. Gives total estimated expenditures for golf, big-league baseball, intercollegiate football, soccer football, etc. The total expenditures for sports of the nations of the world for one year are approximately equal to the total estimated cost of war debts of all nations.

SPAULDING, FRANK E. Football finances. *Yale alumni weekly*, 38: 341, December 7, 1928.

Compares expenditures for athletics with expenditures for all college purposes at various institutions, past and present. Shows that Harvard's total receipts from colonial grants and gifts for all purposes during 184 years lacked more than \$43,000 of Yale's football profits in 1928, that Princeton's total receipts from a colonial grant, from an authorized lottery, and from all gifts amounted to one-third of Yale's football profits in 1928, and that few institutions have endowment funds equal to Yale's annual gross football receipts.

U. S. OFFICE OF EDUCATION. Value of athletic plants as compared with entire institutional plants and annual athletic receipts as compared with total institutional receipts. In *Survey of land-grant colleges and universities. Washington, U. S. Government printing office*, 1930. p. 229-36. (U. S. Office of education. Bulletin, 1930, vol. 1, no. 9.)

What price education; is the interest in athletic sports overshadowing that of education? *Missouri school journal*, 45: 8, January 1927.

Compares the cost of sports and education in the United States and evaluates the social importance of each. Public interest in boxing and football is estimated to outrun interest in education. The cost of a 39-minute 2-man prize fight is compared with the cost of educating 23,000,000 children for one year.

FINANCE

See also Higher Education, Physical Education; Playgrounds; Stadia

Association of colleges and secondary schools in Southern States. Report of the committee on athletics. *Proceedings*, 1924. p. 211-21.

BURKHARDT, C. H. A symposium: Financing inter-school competitive athletics. Buffalo. *American physical education review*, 33: 596-97, November 1928.

A symposium presenting the financing of inter-school competitive athletics in

Chicago and in Buffalo. In Chicago the general scheme of finance is under a Board of Control, consisting of one member from each school, the Board furnishing a per capita allowance for each student. In Buffalo the Department of Physical Education has general administrative control of athletics and the management of high-school athletics is vested in an Athletic advisory council, the entire sports program being financed from money realized from the sale of tickets.

BUTLER, J. A. Financial administration of the athletic department. *Athletic journal*, 7: 24-28, September 1926.

An attempt to show that marked improvements in business administration have taken place in the athletic departments of schools and colleges, as evidenced by the fact that in eight of the universities composing the Big Ten Athletic Conference, the university treasury has complete charge of all athletic receipts and expenditures. It is pointed out how high schools and junior colleges and high schools may adopt this centralized budgetary.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING. In American college athletics. New York, N. Y., *The foundation*, 1929. p. 86-90. (Bulletin, 1929, no. 23.)

Pages 86-90 give a good general picture of sources of revenue and accounting methods in athletics in institutions of higher education with citations of individual schools for illustrations. Other parts have scattered finance materials accessible only through sub-heads such as cost and salaries and the like under the items to which they refer, e. g., coaches or scholarships.

— The literature of American school and college athletics. New York, N. Y., *The foundation*, 1929. 305 p. (Bulletin, 1929, no. 24.)

Well-annotated references, 9 on financing athletics, 5 on cost of athletics, 1 on financial aid to athletes, and 2 on athletic scholarships. Cost and salary data are indexed under the heads to which they refer, as stadia or coaches.

Carnegie foundation for the advancement of teaching on American college athletics. *Texas outlook*, 13: 14-15, December 1929.

Carnegie foundation on American college athletics. *School executives magazine*, 49: 182-83, December 1929.

CADWICK, R. O. The financing of inter-junior college athletics. *School executives magazine*, 50: 15-17, September 1930.

A questionnaire investigation to determine ways and means necessary to finance inter-junior college athletics for Duluth Junior College, based upon data from 28 junior colleges in 11 different States. The data deal primarily with the athletic budget, its sources of income and expenditures.

COLUMBIA UNIVERSITY. Endowed sport — fifty thousand dollars voted by the Columbia alumni fund committee. *Survey*, 65: 560, February 15, 1931.

DELAPORTE, E. C. A symposium: Financing inter-school competitive athletics; Chicago. *American physical education review*, 33: 596-97, November 1928.

FREEMAN, L. J. C. The Organization of Athletic Financial Systems in Indiana High Schools. Unpublished Master's Thesis, *Indiana University*, 1931.

GRIFFITH, JOHN L. Football finance. *Athletic journal*, 7: 36, October 1926.

— The annual football debate. *Athletic journal*, 7: 44-46, September 1926.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Athletics. *University of Nebraska, extension division. Lincoln, Nebr.*, 1932. p. 145-47, 199. (University of Nebraska publications, educational monograph, no. 3. 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

HOBBS, A. WATT. The organization and administration of finances in inter-scholastic athletics. Knoxville, 1930. 13 p. *The university of Tennessee record extension series VI, no. 6, Knoxville, Tenn.*, April 1930.

Presents forms for budgeting and accounting for expenses of athletics. Uses a budget of \$1,500 to illustrate procedure.

JOHNSON, A. S. Comments on business aspects of athletics. In Fifteenth annual meeting of university and college business officers, 1925. *Iowa City, University of Iowa*, 1925. p. 94-97.

Raises nine questions concerning the control and business accounting of college athletics. Notes progress in the budget preparation, accounting for receipts and disbursements, the purchase of equipment and supplies, care of equipment, extension of plants, and the addition of intermural sports to the program.

KLEEBERGER, F. Rental system for administration of athletic clothing. *Junior health and physical education*, 1: 8, 24-25, 53, October 1930.

KUNTZ, CHARLES A. The business aspects of athletics. In Association of university and college business officers. Fifteenth annual meeting. *Iowa City, University of Iowa*, 1925. p. 79-84.

Accounts for the gate receipts, costs, expenditures, and profits of intercollegiate

athletics at Ohio State university. Football finances seven other sports, an intermural athletic program, and the construction of a stadium. Only 15 per cent of gate receipts are required for the maintenance of varsity teams, the remainder going to support other activities.

ST. JOHN, L. W. The future of inter-collegiate sports and the use of large gate receipts. *American physical education review*, 28: 260-61, June 1923.

WÄGENHORST, LEWIS H. The administration and cost of high-school inter-scholastic athletics. *New York, N. Y., Teachers college, Columbia university*, 1926. 134 p. (Teachers college, Columbia university. Contributions to education, no. 205.)

Includes the provisions made by local boards for athletic and physical education activities, costs of physical education compared with costs of athletics and determines sources of revenue and methods of handling money.

WILLIAMS, J. F. and HUGHES, W. L. Athletic finances and purchases of equipment. In *Athletics in education*. Philadelphia, Pa., W. B. Saunders Co., 1930. p. 148-79.

Brief descriptions and sound advice on sources of income, methods of raising money, management of funds, budget procedures and forms, procedures and forms for economical purchasing.

ATTENDANCE

COSTS

AUSTIN, T. L. Waste in expenditure due to nonattendance. *Lincoln, Neb., University of Nebraska*, 1927. (Teachers college, University of Nebraska. Research Bulletin, January 1927.)

A detailed analysis of costs in a small Nebraska community in 1925-26, enlarged to include a few figures for the State. The methods of computing the costs are suggestive, particularly the one showing the decreased efficiency of the dollar.

HANSON, WHITTIER LORENZ. The costs of compulsory attendance service in the state of New York and some factors affecting the cost. *New York, N. Y., Teachers college, Columbia university*, 1924. 122 p. (Teachers college, Columbia university. Contributions to education, no. 158.)

Examines the type of attendance service found in certain cities of New York State, the degree to which laws are enforced, the cost per child to the State of efficient attendance service, and the factors which effect the cost of attendance up to 1922. Finds attendance service costs well under 1 per cent of total current expenses.

KRUEGER, RAYMOND LESLIE. A comparison between school attendance

and school costs. *Journal of educational research*, 17: 273-77, April 1928.

From a study of total population, average daily school attendance, total expenditures for schools, and number of pupils enrolled in the high schools of the United States from 1870 to 1924, draws six conclusions regarding the status of the school, increasing costs, and school support. Submits increase in school enrollments, particularly in the upper grades, depreciation of the dollar, and the increase in the amount, the kinds and quality of school service demanded by society, as explanations of increasing school costs.

New Mexico. Attendance and costs. In *Report on public day schools*. State department of education, *State publishing house, Santa Fe, N. Mex.*, 1926. 75 p.

STATISTICS

[These will be found in the State and city school statistics bulletins of the United States Office of education. See State Statistics and City School Statistics]

AUTOMOBILE COSTS

California. Automobiles and school enrollment in California. *School and society*, 24: 788, December 25, 1926.

A comparison of the expenditures for automobiles in California with the cost of education in 1926. Expenditures were, for education \$130,737,912; for gasoline, \$145,353,483. Adding automobile capital outlay and other motoring expenses, the cost of education becomes comparatively negligible.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. State's annual bills for schools and passenger automobiles in 1928 (table). In *Investing in public education*. Washington, D. C., *National education association*, 1930. p. 179. (Research Bulletin, vol. 8, no. 1, September 1930.)

A statistical comparison of the money spent by the population of the various States for education and automobiles. Cost figures, comparative percentages, and an index of relationships are tabulated by States for 1928. Figures for earlier years are in previous bulletins, traceable through the index at the end of each volume.

AUXILIARY AGENCIES

COSTS

See also Attendance; Health; Library; Physical Education

California. Economies in special services. *California schools*, 3: 70, March 1932.

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SCHOOL STATISTICS

See also Borrowing, School, States, Individual

[These will be found in the State and city school statistics bulletins of the United States Office of education. See State School Statistics; City School Statistics]

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- Discusses the relation of land prices to money rates and possible savings from selling bonds when money is plentiful, as a defense of the principles that the public money should be saved whenever possible. States that seasonal fluctuations of high bond prices and low interest rates can be utilized.
- CUMMINS, GAYLORD C.** The pay-as-you-go plan. *National municipal review, June, 1924.* p. 335.
- DICK, WILLIAM.** Problems in financing a city school system. *American school board journal, 70: 41, June 1925.*
- DYER, C. A.** Ohio tax districts on pay-as-you-go basis. *The tax digest, 5: 160, November 1927. California taxpayers' association, Los Angeles, Calif.*
- ENGELHARDT, N. L., and ENGELHARDT, FRED.** Planning school building programs. *New York, N. Y., Teachers college, Columbia university, 1930.*
- Public-school business administration. *New York, N. Y., Bureau of publications, Teachers college, Columbia university, 1927.* p. 412-28.
- Discusses pay-as-you-go plan, building reserves, amount and time for bond issues, common unsatisfactory conditions affecting indebtedness, and the municipal control of school debts. Examines possible future improvements in school bonding procedures, and the relation of the building program to the educational program. Analyzes the educational theory.
- ESSEX, DON L.** Bonding vs. pay-as-you-go in financing school buildings. *New York, N. Y., Bureau of publications, Teachers college, Columbia university, 1932.* (Teachers college, Columbia university, Dissertation.)
- An exhaustive study of the status and implications of the pay-as-you-go policy for American school systems concluding that it ought to be used where building is a frequently recurring expense, and set up as a goal elsewhere. More than 100 unannotated references and many statistical data. Recommends that someone work out a technique for finding out what money is worth in a community as an aid in determining the community's decision on such a policy. Bibliography.
- ESSEX, DON L.** Bonding versus pay-as-you-go. Parts I, II, and III. *American school board journal, 83: 37-38, 108, 111, August 1931; 83: 39-40, 92, October 1931; 83: 55, November 1931.*
- Appraises both methods, submits criticism of each and considers the method to be adopted in a local situation. Develops a plan of cooperation between school and municipal authorities which makes possible a pay-as-you-go program even for the small community. Describes actual cases. Bibliography.
- FORD, GEORGE B.** Long-term budgeting and the city plan. *National municipal review, vol. 17, August 1928.*
- FOWLKES, JOHN G.** School bonds. *Milwaukee, Wis., Bruce publishing co., 1924.*
- GIBSON, I. G.** Borrowing by local authorities. *Journal of public administration, 6: 16, January 1928.*
- GWINN, JOSEPH M.** Financing school buildings. *Sierra educational news, 24: 6-7, December 1928.*
- The cost of financing a school building program by the bonding, the pay-as-you-go, and the depreciation plans are compared in this article, and some practical advantages and disadvantages of each plan are examined by the superintendent of the San Francisco schools.
- HEDGES, C. F.** A study of the pay-as-you-go plan for new school buildings. *American school board journal, 78: 134, April 1929.*
- A brief report of a study of the pay-as-you-go plan for new school buildings in 133 cities of varying population. Shows that during the last 10 years, 10 per cent of the total amount expended for new school buildings in three cities was

- financed by the pay-as-you-go plan, and 84 per cent chiefly by bond issues.
- HUNT, H. S. A comparison of two methods of financing. *American school board journal*, 77: 46-48, November 1928.
- Discusses the two plans of school financing school buildings—the sale of bonds and the collection of sufficient tax money prior to construction. Shows that the latter plan costs more than the former and presents a graphic comparison of the two plans.
- JONES, ROBERT B. Pay-as-you-go for road costs. *The tax digest*, 7: 275, August 1929. *California taxpayers' association, Los Angeles, Calif.*
- LOVEJOY, PHILIP. Some financial fallacies. *American school board journal*, 79: 51, September 1929.
- LOWMAN, HARMON L. The capital reserve vs. bonding. *Texas school journal*, 45: 14, 21, January 1928.
- MACDONALD, THOMAS H. The pay-as-you-go myth. *Municipal and county engineering*, 72: 154, April 1927.
- Mayor Nichols not to abandon pay-as-you-go policy in conduct of city's business. *Boston city record*, vol. 18, March 6, 1926.
- MOEHLMAN, ARTHUR B. Methods that may be employed in financing new buildings. *Nation's schools*, 9: 74-77, January 1932.
- The advantages and disadvantages of the following three plans are set forth: Pay in advance; pay-as-you-go; and the credit plan.
- Public-school plant program. *Chicago, Ill., Rand McNally*, 1929. p. 211-12.
- This section advocates the pay-as-you-go plan for communities having an annually recurring program of outlay. Points out the advantage of being the cheapest method of financing improvements, with regard to direct cash outlay.
- NETTLETON, A. Borrowing vs. pay-as-you-go. *The account*, 77: 371, September 17, 1927. (London.)
- NEW YORK STATE LIBRARY. Compilation of opinions of the governors of the various States on the policy of pay-as-you-go, versus bonds for public improvement, 1925. Prepared by legislative reference section, *New York State library*. On file, National Institute of Public Administration, New York City.
- OTTO, C. W. Building schools without bonds. *American city*, 42: 97-98, June 1930.
- An explanation of how Lansing, Mich., meets all building costs out of current funds, thus saving, for educational activity, large sums which most communities pay for interest on bonded indebtedness.
- Pay-as-you-go plan in Wichita. *American school board journal*, 78: 44, May 1929.
- Pay-as-you-go policy in Denver. *American school board journal*, 75: 55, November 1927.
- Pay-as-you-go. *School executives magazine*, 48: 312, March 1929.
- Pay-as-you-go. *School executives magazine*, 49: 240, January 1930.
- RAINEY, HOMER P. Financing the capital costs of education. *American school board journal*, 73: 61, December 1926.
- RIGHTOR, C. E. Wayne county adopts a long-term pay-as-you-go building program. *The American city*, 39: 156, December 1928.
- School building financing and the pay-as-you-go plan. *American school board journal*, 77: 71, July 1928.
- SMITH, T. K. How a school district can obtain the best price for school bonds. *American school board journal*, 70: 73, 74, 130, January 1925.
- The author, a well-known banker, a member of the municipal securities committee of the Investment Bankers Association of America lays down seven steps, with full explanation of each, for making school bonds more attractive and desirable to the investor. Lists a table suggesting amortization of bonds. Bankers pay the best price for what is most attractive to them.
- STUDENSKY, PAUL. Some errors in the treatment of the pay-as-you-go plan. *National municipal review*, 13: 499, September 1924.
- Will pay-as-you-go pay? *Toledo city journal*, 11: 377, August 7, 1926.
- YOUNG, BENJAMIN L. Further arguments for pay-as-you-go. *National municipal review*, 13: 497, September 1924.
- ZUKERMAN, T. DAVID. The pay-as-you-go plan is cheaper. *National municipal review*, 13: 481, August 1924.

BUDGET

ECONOMIES

- CLARK, HAROLD F. Measuring the budgetary procedure of a school system. *American school board journal*, 68: 37-38, June 1924.
- Discusses the abstract nature of attempts to measure the efficiency of budgetary procedures used by school administrators; reproduces a tentative score-card for measuring the efficiency of local machinery set up for the preparation, voting, execution, and control of school budgets. The score card was prepared from literature of the field, opin-

ions of administrators, job analyses, and actual checks against budget operations in the field.

Suggestions for scoring school budgets. *American school board journal*, 71: 47-48, 133-34, October 1925.

Sets up standards for the personnel of budget preparation, the estimates of expenses and incomes, budget forms, budget publicity, execution of the budget, and for checking the budget and handling deficiencies.

Ross, C. Budgeting to prevent waste. *Nation's schools*, 6: 39-42, July 1930.

Describes wastes existing in America, including educational ones. Points out financial and educational retrenchment possible by careful planning of expenditures without impairment of instruction. Lists some instruction economies practiced in Pennsylvania, defines budget, and offers suggested economies.

Scientific approach to school budget making. *American school board journal*, 73: 68, October 1926.

The advantages and necessity of a careful and intimate study of local educational needs to account specifically for each dollar spent, and to reasonably determine desirable lines of retrenchment and expansion.

SIMPSON, A. D. State aspects of fiscal articulation. In National education association. Department of superintendence. Official report, 1931. Washington, D. C., National education association, 1931. p. 261-62. (Abstracts.)

An abstract of the discussion of State aspects of fiscal articulation. Recommends that State support be based upon equalized educational opportunities, with all the elements of the State's educational system coordinated through a central agency of educational control, and an executive budget with appropriations voted by the legislature.

SOPEL, W. W. Budget your school system out of the hole. *American school board journal*, 80: 47-48, February 1930.

A general and exhaustive criticism of wasteful methods in school finance, followed by a practical budgetary system designed in 1929 to eliminate waste and to increase efficiency. Gives six criteria to be used in preparing a budget.

TRUE, JOHN A. Can we reduce the budget and maintain efficiency?—abstract. In National education association, department of superintendence, official report, 1932. Washington, D. C., February 1932. p. 208-10.

WEHN, W. C. Keeping school expenditures within appropriations. *American school board journal*, 76: 94, 149, 150, 152. April 1928.

Philosophical article explaining effective budgeting as an economy measure. Outlines methods of determining sums

available for expenditure and for coordinating the budget and the educational policy, with a philosophy and technique of budget control.

IN BUSINESS

BARBER, JOSEPH H. Industrial budget methods. *Management and administration*, 8: 371-76, October 1924, 479-86 November 1924, 589-94 December 1924, 9: 15-20 January 1925, 129-33 February 1925.

Applies business methods of forecasting to the construction of educational budgets. Includes graphs.

CONLEY, HOWARD. The development of industrial budgeting. *Annals of American Academy*, 119: 64-79, May 1925.

DARNELL, R. W. The use of budgets in reducing overhead. *National association cost accountants* (Official publications), 6 October 1924.

DONALD, W. J. Be sure your budget is honest. *Factory*, 36: 1034-1172, June 1926.

Contends that the really effective budget is a budget of probabilities, not one of possibilities.

FORDHAM, T. B. and TINGLEY, E. H. Organization and budgetary control in manufacturing. *New York, N. Y., Ronald press*, 1924.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Budgetary control in the manufacturing industry. *New York, N. Y. National industrial conference board, inc.* 1931.

Concise discussion of various types or classes of budgets used in manufacturing and industry. Presents methods of computation and the process of commercial and industrial budgets with organization and clarity. Only indirectly applicable to educational finance.

SHEPHERD, H. I. Budgeting, my experience with many industries. *System*, 48: 699-701, December 1925.

Reviews a banker's experience with many industrial budgets and recommends a method of procedure that may be applied to educational budgets.

VIEH, W. F. Why the budget? *Journal accountancy*, 40: 173-79, September 1925.

What a budget means to the treasury department of a progressive organization. *The Annalist*, 26: 545, October 30, 1925.

GENERAL

BUCK, A. E. Development of the budget idea in the United States. *Annals of American Academy*, 118: 31-39, May 1924.

Public budgeting. *New York, N. Y., Harper and Bros., 1929.*

Presents a picture—more or less complete—of the budgetary practice, as it exists to-day, in the National, State, and local governments of the United States, and of the budgetary experience of the United States covering only the last 25 years. Considers briefly historical, legal, social, and economic phases.

NATIONAL MUNICIPAL LEAGUE. Committee on a model municipal budget law of the National municipal league. A model municipal budget law. *New York, N. Y., National municipal league, 1928.* 17 p. (Supplement to the National municipal review, vol. 17, no. 7, July 1928.)

The model budget law recommended for States, counties, and municipal governments in some detail.

SHIRAS, G. F. Science of public finance. *London, England, Macmillan co., p. 553-610, 1925.*

MUNICIPAL

BOYD, C. E. Civic bodies unite to study city budget. *American city, 30: 413, April 1924.*

Various organizations cooperated for this study. They hoped to work out a municipal budget plan based on the average expenditures for departments during the past 10 years.

BUCK, A. E. Progress in budget making. *National municipal review, 13: 19-25, January 1924.*

Points out the salient points developed in scientific budget construction and the causes for ineffective municipal budgets.

Suggestions for improving the present budget procedure in cities. *American city, 30: 282-85, March 1924.*

Several usable ideas for improving the present budgetary procedure in cities, touching on the following questions: Lack of uniformity, construction or improvement programs, the budget as a means of publicity, and flexibility in budget operation.

FITZPATRICK, E. A. Budget procedure in a large city. *American school board journal, 79: 55, August 1929.*

Supports the plan of budget-making by the superintendent of schools on the ground that his place as chief executive of the school systems puts him in a strategic position for doing this work. Calls attention to need for utilization of practical experience of teachers and for a continuous study of the subject throughout the year.

GODDARD, J. P. Municipal budgets. *Journal of accounting, 38: 430-34, December 1924.*

State paternalism and municipal budgets. *American city, 32: 250, March 1925.*

Examines municipal reactions in New Jersey to the suggestion that the State

government be given certain authority to draft and administrate municipal budgets.

NATIONAL

[Detailed statistics are given in the President's annual budget message, a large volume transmitted in early December. Comment may be found in the *United States Daily* and editorials of leading periodicals and newspapers]

WILLOUGHBY, W. F. Financial condition and operation of the National budget, 1921-1930. *Brookings Institute, Washington, D. C. 1931.*

National budget system. 1927. *Brookings Institute, Washington, D. C.*

GENERAL SCHOOL

For material on budgeting for any item, e. g., Personnel, or Extracurricular Activities, look for Budget under that item.

ASPLUND, RUPERT F., Mechanics and Operation of Successful School Budget Control. *The law digest, September, 1929, p. 316; California Taxpayers' Association, Los Angeles.*

Relates the evolution of school budget procedure in New Mexico. A county budget commission, budget hearings and State review enter into the picture.

BELL, A. HOWARD. Administering the school budget and pay roll. *American educational digest and school executive magazine, 48: 105, November 1928.*

Possibility of administering through scientific procedure and controlled accounts, a school budget and pay roll in order to keep or to gain the public confidence. Gives general set-up of the system of bookkeeping as used in Gary, Ind.

Making and administering the school budget. In Ohio State educational conference. Eighth annual proceedings, 1928. p. 509-23. (Ohio State university. Bulletin, vol. 33, no. 3.)

BURCHARD, F. F. The school budget and school accounting. *North Dakota teacher, 4: 10-12, November 1924.*

CALIFORNIA TAXPAYERS' ASSOCIATION, Los Angeles. Alhambra school budget study for 1931-32. Report no. 181, May 1931. 16 p. ma.

CARVER, H. Keeping within the budget. *Nation's schools, 3: 37-38, April 1929.*

This article explains how a superintendent may speedily and accurately inspect the disbursements in a small school by using a chart showing expenditures according to function. Gives accounting form headings and a clear record of disbursements by the month which become

valuable for quick inspection and for compiling new budget estimates or for inspection, control, and reference.

CASTLE, LYNN E. Budgeting in the small school. *American school board journal*, 76: 55, 142, 144, June 1928.

Gives an example of the confusion and extravagance resulting from the uncoordinated work of school board purchasing committees and explains how a budget planned and administered by a trained superintendent will effect order, efficiency, and economy.

CLARK, H. F. A cross-indexed bibliography on school budgets. *Bloomington, Ind., University of Indiana*, 1926. 66 p. (University of Indiana. School of education. Bulletin, vol. 2, no. 3, 1926.)

Includes 2,080 articles written between 1907 and 1926. Articles are cross-indexed under 32 heads, chief of which are history, nature and purpose of budget, importance, feasibility and legal basis of the budget, charts and diagrams used in budgets, forms of budgets, principles of budget making, preparation, voting and executing of budgets, budget reports and criticism of budgets. Index of authors.

— Measuring the budgetary procedure of a school system. *American school board journal*, 68: 37-38, June 1924.

After discussing the abstract nature of attempts to measure of efficiency of budgetary procedures used by school administrators, this article reproduces a tentative score card for measuring the efficiency of local machinery set up for the preparation, voting, execution, and control of school budgets. The score card was prepared from literature of the field, opinions of administrators, job analyses, and actual checks against budget operation in the field.

— Measuring the budgetary procedure of a school system. *Bloomington, Indiana university school of education*, 1925, p. 20-27. (Bulletin of the school of education, Indiana university, vol. I, no. 3, 1925.)

Philosophical article attempting to apply business methods of financial estimating to school budgetary practices. Outlines a score card of 20 items by which school administrators may measure the efficiency of their practices in regard to the preparation, voting, execution, and control of their budgets.

— Suggestions for scoring school budgets. *American school board journal*, 71: 47-48, 133, 134, October 1925.

A score card and a manual for scoring school budgets. Gives a concise review of school budget practice.

DE YOUNG, C. A. Extraneous factors affecting budgetary practices in public school administration. *American school board journal*, 83: 38-40, November 1931.

Summarizes a rather exhaustive study of the unforeseen and unpredictable factors seriously affecting the school budget.

ELKEMA, H. H. Budget minus guess work. *American school board journal*, 81: 57, August 1930.

Discusses procedure in budget construction and presentation 1929-30. Three documents—report of previous year—actual budget proposals and budget questions and answers—present the school board with fiscal report functioning budget and allow every board member full information upon every budget item. Presents actual budget figures summary 1930-31.

ELLIOTT, A. W. The benefits of budgetary laws. *Ohio schools*, 6: 132, 138, 140, April 1928.

EMERSON, WALLACE. School budgets and budget procedure. *American school board journal*, 70: 39-40, 55-56, May June 1925; 71: 51-52, 52-53, July August 1925.

Series of four articles on school budgets and budget procedure, laws relating thereto, and well-known facts on procedure. Points out fundamental principles involved in authorization by State provision, agencies prescribing form, basis for and control of expenditures.

ENGELHARDT, N. L. Superior school budgets. *School executives magazine*, 50: 309-10, March 1931.

Reviews 100 city school budgets and gives examples of "superior" budgets. Annotates three city school budgets—Des Moines, Iowa, Madison, Wis., and Montclair, N. J., and lists characteristics of a constructive and effective budget.

— and ENGELHARDT, FRED. Some aspects of budgetary practice in local school systems. *Teachers college record*, 28: 394-412, December 1926.

A general treatment of school budgetary practices and principles. Reproduces a budgetary calendar and discusses standards essential to budgetary control, cyclic aspects of budgetary control, income budget considerations, tentative expenditure budget, budget and plant program, budgets for internal activities, responsibilities for the budget, budget review and approval, the form of annual budgetary statement, procedure in the preparation of the budget, and the limitations of the budget.

— The budget, preparation and use. *In their Public-school business administration*. *New York, N. Y., Teachers college, Columbia university*, 1927. p. 508-57.

A comprehensive and detailed discussion pointing out the necessity of including in the budget a plan for sufficient funds, and of giving the entire plan publicity. Cites general practices in budget making. Illustrated with forms and charts.

EVANS, F. O. Research and the School Budget; *The tax digest*, May 1931, p. 154; *California Taxpayers' Association*, Los Angeles.

Helpful points on school budgets, what they are for, how to prepare and use them, functional analyses, unit costs, etc.

FENTON, WALTER S. The school superintendent and the school budget. *American school board journal*, 68: 48, 134, April 1924.

Simple nontechnical presentation of the common considerations in planning a school budget. Warns of the results of too stringent economy.

GREENE, CRAWFORD. Budget making. *Journal of Arkansas education*, 9: 26-27, 30, May 1931.

GREENE, G. W. Budgetary control in the smaller school systems. *American school board journal*, 81: 4, 7, 8, December 1930.

This article discusses a nontechnical, practical accurate method of school budget producing exact information to be placed in hands of school board each month. A final yearly itemized statement becomes a basis for the ensuing budget.

HAAS, FRANCIS B. An analysis of the educational budget and the developing financial needs of education, 1925-27. In *University of Pennsylvania. Twelfth annual Schoolmen's week proceedings, 1925*. p. 157-65.

Supervision of the budgets of State educational institutions. *Annals of the American academy*, 113: 112-20, May 1924, no. 202.

The author, who is director of the administration bureau, Department of public instruction of Pennsylvania, declares that "State supervision must accompany State money."

HALL, WILLARD Z. Budgetary School Procedure for Intermediate Sized Cities June, 1927. Unpublished M. A. Thesis, *University of Oklahoma, Norman, Okla.*

How to prepare and analyze a school district budget. *Tax digest*, 7: 198-200, June 1929.

Indiana. Estimating school expenditures. Thesis, 1926. *Bloomington, Ind., Indiana university*, 1926.

Informing the principal on his budget. *American school board journal*, 74: 144, 146, May 1927.

Presents 12 instructions issued by the business manager of Evansville, Ind., to the various school principals informing them just what amount of money their schools are allowed for the school year, and charging them with the efficient utilization of such allowances.

LINDSAY, H. E. School budgets. In *His Problems in school administration*. New York, N. Y., Macmillan co., 1928. p. 77-98.

Defines the purposes of the budget, outlines the ordinary classifications, enumerates the accounting needs which are met by the budget, and discusses the comparisons a budget should facilitate and some other general uses of the budget.

LOVEJOY, P. C. Administering the school budget efficiently. *Nation's schools*, 5: 92, January 1930.

This article recommends the card system of requisition because it enables one to accurately foretell amount needed for next year, to trace color, and to reorder same articles. This system of supply financing begets efficiency and economy in purchase and distribution. Explains a method by which supplies may be predicted accurately in quantity, like quality, and within budget specifications as to price.

Business of budget making in a functional organization. *Nation's schools*, 4: 86, December 1929.

Emphasizes the fact that administration must study school costs by departments, carefully analyzing present expenditures and making estimates of needs scientifically. Suggests budgetary activity to carry out the unit type of functional-instructional organization in which the board of education is legislative and judicial and the administrator with his force is executive or the functional-instructional organization. The author demonstrates how Hamtramck, Mich., developed its budget and organized to execute the plan. Tables or diagrams illustrate the features.

McCLINTON, J. W. Distribution of school expenditures under budget control. *School executives magazine*, 49: 27-29, September 1929.

Analyzes the provisions of various school budgets and expresses some unreasonable differences. Suggests principles that should govern the budget provisions for buildings and supplies and recommends standardization and simplification as a means of securing the proper apportionment of funds.

MCGAUGHY, J. R. Who shall determine the amount of the city school budget? *American city*, 30: 350-52, April 1924.

From a study of the budgets of 377 cities, the investigator attempts to show that school finances should not be subject to any control but that of school officials.

McKINNEY, C. A. The administration of the public-school budget. M. A. thesis, 1931. Available from *University of Nebraska library*. Lincoln, Nebr.

MOEHLMAN, ARTHUR B. Making finance the servant not the master of education. *Nation's schools*, 8: 64-66, September 1931.

The need of long-time budgeting and sound accounting considered merely as agencies for carrying out the educational program which in turn should be considered as only part of the larger social program.

Public school finance. *New York, N. Y. Rand McNally company*, 1927.

The chapter on "The school budget," outlines and analyzes the three complementary steps of budget development, preparation, presentation, and adminis-

tration, and examines the factors which condition the presentation of the budget. "Making the budget," Chapters 16, 17, 18, pages 231-80, describe the techniques of forecasting the costs of personal service, nonpersonal service, and capital outlay. Chapters on the forms and organization of the completed budget follow.

Relation of school finance to the budgeting of public expenditure. (Abstracts.) *Washington, D. C., National education association. Department of superintendence. Yearbook, 1931.* p. 260-61.

Treats two budget types, (1) annual finance for a period determined by law, (2) long-time planning for possible expenditures over long period.

The public-school budget. In *Review of educational research. Finance and business administration number, vol. II, no. 2, April 1932.* p. 105-7, 164-66. *American educational research association, department of National education association, Washington, D. C.*

Running review and bibliography stressing researches from 1923 to the fall of 1931.

MORRISON, HENRY C. The budget. In *his* The management of the school money. *Chicago, Ill., University of Chicago press, 1932.* p. 488-513.

A theoretical treatment with practical implications stressing that "the budget of a given year is of little use unless it is related to long-term policy," and that the budget should be balanced.

MYERS, VEST C. A study in budget planning. *Southern school journal, 38: 11-12, April 1927.*

NUTTALL, L. JOHN. Budget making for county unit districts. *American school board journal, 72: 57-59, April 1926.*

Budget variability greater in county unit in Utah than in city unit. Gives statistical data and tables establishing norms for county unit budgets, using three budgets (1915-16, 1917-18, 1919-20). Compares with California counties, consolidated schools of Ohio and percentage of total current expenditures for Western cities. Findings on county unit peculiarities.

PERRIN, H. A. The school budget report. *American school board journal, 69: 69-74, October 1924.*

Discusses the use of the budget as a monthly report and shows the form.

PETERSON, M. E. The budget system. *Bulletin of the department of elementary school principals, 6: 416-18, July 1927.*

PITTINGER, B. F. The school budget. In *his* An introduction to public school finance. *Boston, Mass., Houghton Mifflin co., 1925.* p. 45-72.

Recent achievements in budget planning. *American school board journal, 68: 41-42, March 1924.*

Historical article outlining the following six constructive practices as progress in budgetary procedure: The budget as a continuous process, definition and classification of items of the budget, demanded by schoolmen for written estimates, introduction of better business standards, accounting to public and securing public support by use of budget information for publicity purposes, and comparison of school costs with other public expenditures.

REEDER, WARD G. Some suggestive forms for school budget-making. *Educational research bulletin. Columbus, Ohio. 5: 297-300, October 6, 1928.*

Recommends use of 13 accounting forms and reproduces the summary budget form suggested for use in the Ohio schools, in order to facilitate the training of fiscal officers, significant fiscal comparisons, the effective presentation of county, State and Federal financial reports, and the auditing of financial reports.

Fundamental principles of school budget-making. *Ohio teacher, 47: 107-109, November 1926.*

(This article may also be found in *Educational research bulletin, 5: 263-68, September 22, 1926.*)

As an outline to guide the preparation, presentation, and administration of a school budget, this article reproduces the budget summary sheet used in the Ohio School report and presents the following principles: (1) there should be full cooperation between the board and the superintendent; (2) the budget should be inclusive; (3) it should be well proportioned and not padded; (4) sufficient revenues should be listed; (5) every request should be justified; (6) there should be full publicity for the budget; (7) the budget should be followed; (8) there should be a definite and systematic check.

ROBERTS, J. A. Preparation of a school budget. *American school board journal, 82: 76, March 1931.*

Discusses principles of county budget-making and manner of presentation, adaptation, and administration. Tabular data show the approximate per cent which each item of expenditure is of current expenditures.

Rochester, N. Y. BOARD OF EDUCATION. The budget of the board of education, 1932. *Rochester, N. Y., Board of education. 1931.* 16 p.

Significant for popular presentation elements, particularly for translation of functional expenditure terms.

School budgets—full educational returns for every dollar. *American educational digest, 47: 254, 270, February 1928.*

Scientific approach to school budget making. *American school board journal, 73: 68, October, 1926.*

The advantages and necessity of a careful and intimate study of local edd,

ational needs to account specifically for each dollar spent, and to reasonably determine desirable lines of retrenchment and expansion, are discussed.

SIMLEY, IRVINE T. Preparations and execution of school budget. *American educational digest*, 46: 352-56, April 1927. Tables.

SLATER, C. P. and GREENE, HARRY A. Administration of the school budget. *Iowa City, Iowa. University of Iowa extension bulletin*, no. 122, 1925. 24 p. (College of education series no. 12, April 15, 1925.)

Presents sample budgets by using actual attendance data. Emphasizes the importance of evaluating various budget items.

SOPER, W. W. By their budgets you may know them. *School executives magazine*, 49: 310-12, March 1930.

A device to evaluate school budgets professing to measure the efficiency of budgetary principles and policies, preparation, presentation and practices, execution, control, and publicity. Lists the principles that should govern budgetary procedure.

SPECIAL COMMITTEE, CALIFORNIA PUBLIC SCHOOL BUSINESS OFFICIAL ASSOCIATION. Report of committee on definition of accounts as they appear in budget forms and annual reports. In proceedings of fourth annual convention of the public school business officials association of the State of California. *Fresno, Calif.*, March 1931. p. 32-49.

Presents detailed forms for complete school budget.

STRETCHER, E. T. Detailed school budget. *School executives magazine*, 48: 513-14, July 1929.

How to develop and how to use a school budget. *Nation's schools*, 3: 63-65, June 1929.

Defines and explains what constitutes a school budget and how its significant features are determined. Includes a statement of the source of funds, their disbursement and method of recording under administrative or other heading.

Development and use of a detailed school budget. National association of public-school business officials. Proceedings, 1929. p. 20-24.

A general analytical discussion of the development and use of a budget, certain phases of which are regulated by precedent, as salary schedules, and others not so regulated, as artificial light. Emphasis on persuasive and understandable arrangement and presentation of budget items.

Study in budget-making. *American school board journal*, 72: 76, June 1926.

Statistical study of expenditure increase and ratio variation in 10 counties

of Pennsylvania. Table of comparative statistics prepared by superintendent of Beaver County, Pa., based upon total expenditures of representative boroughs shows combined expenditure increased 100 per cent in 5 years. Ratios on budgets show little variation for last 20 years.

TWENTY, J. W. Budgetary procedure for a local school system. Doctor's thesis, 1923. *Montpelier, Vt., Capital city press*, 1923. 184 p.

Thoroughly covers statutory and charter provisions in hundreds of cities, particularly in New York State, unit costs for budget purposes and suggested record forms for collecting budget data.

VANDEGRIFT, R. A. How California Taxpayers Association uses Scientific research in budget-making. *Tax Digest*, 7: 7-27, January 1929.

WEBER, O. F. Budgetary procedure and practice. In his Problems in public-school administration. *New York, N. Y., Century co.*, 1930. p. 448-96.

This chapter outlines facts needed and procedures that may be followed in drafting a budget. Illustrates the forms through which the necessary data may be collected and lists the factors that must be considered for an effective budgetary procedure.

WEHN, WILBERT C. Keeping school expenditures within appropriations. *American school board journal*, 75: 47, November 1927; 76: 94, 149-50, 152, April 1928.

WRIGHT, MARK. Clearfield's school adventures. *American school board journal*, 82: 80, May 1931.

The planning of the school budget of Clearfield, Ohio, to meet a deficit of \$3,500 and prepare for future increasing expenditures. Budget arranged under seven main heads, under each head an additional item of other expense. In this provision lay the solution of unforeseen expense. The original deficit was met in the grand total.

STATES, INDIVIDUAL

California. TRENHAM, N. BRADFORD. School Finance: *The tax digest*, June, 1931, p. 203; *California taxpayers' association*, Los Angeles.

Discusses financial aspects of the California School Code showing the course followed by the budget from tentative estimates to setting the tax rate together with a description of the sources and amounts of school funds, tax rates and apportionments. The responsibility of school boards for tax rates and school costs is stressed.

Massachusetts. LAMBIE, MORRIS B. Control in the commonwealth of Massachusetts. *Annals American academy*, 118: 94-105, May 1924.

Missouri. PARKER, C. W. A budget for Missouri school systems. *School and community*, 14: 165-67, March 1928.

— ROGERS, T. H. The budget system in Missouri. *School and community*, 12: 404-6, October 1926.

North Carolina. School budgets in North Carolina. *American school board journal*, 76: 141-42, March 1928.

Ohio. FUNKHAUSER, H. A. School budget hearings in Ohio. *Educational research bulletin*, 10: 178-82, April 1, 1931.

Deplores the fact that the general public has not been greatly interested in school budget hearings in Ohio as required by the general code. Questionnaires to school board clerks prove the public disinterest. Suggests plans increasing public interest in school budget preparation.

— REEDER, WARD G. Status of school budgeting and financial accounting in Ohio. In Ohio State educational conference. Sixth annual proceedings, 1926. p. 92-98. (Ohio State university bulletin, vol. 31, no. 2.)

Pennsylvania. HUNT, C. W. Developing budgetary control in relation to the State Institutions of Pennsylvania. *Annals American academy*, 113: 120-28, May 1924.

WELLS, R. H. The item veto and State budget reform. *American political science review*, 18: 782-91, November 1924.

BUILDING

ACCOUNTING

See also Capital Accounting

ENGELHARDT, FRED. Principles governing management and accounting for the school plant. *American school board journal*, 75: 43-44, August 1927.

Discusses methods of accounting for the school plant, current expenditures and capital outlays, values of school plant, cost values and changes in cost values, factors affecting plant values, depreciation obsolescence, inadequacy, insurable value of plant, school plant cost, and the cost of plant service to show principles governing the management and accounting for the school plant.

MOEHLMAN, ARTHUR B. Public-school plant program. *New York, N. Y., Rand McNally*, 1929. p. 384-95.

Facsimile of a series of useful forms for the keeping of accurate records of school finance. (1) Property value, assessed vs. transfer (tabulation sheet). (2) Property value, assessed vs. transfer (original entry sheet). (3) Property value, assessed vs. transfer (explanatory

of form no. 2). (4) Assessed valuation of school district. (5) Total and per capita wealth record. (6) Financial conditions and plans of city. (7) School bonding history of matured bonds. (8) School debt record. (9) Summarized financial facts. (10) Value of grounds, buildings, and school property. (11) Tax levy. (12) Distribution of expenditures by departments of service.

MORRISON, HENRY C. The management of the school money. *Chicago, Ill., University of Chicago press*, 1932. p. 70-146.

An original theoretical treatment with practical illustrations with chapters on cost in buildings and equipment, depreciation, extension, and capital reserve.

MURRAY, GEORGE STEPHEN. Accounting for depreciation of school buildings. *New Haven, Conn., Journal of educational research*, 24: 318, November 1931.

A mimeographed bulletin setting forth the problem and its importance, commercial and municipal depreciation practices, the depreciation of school buildings, principles of depreciation, the technique for computing depreciation allowance, and conclusions.

WOODWARD, HARRY R. Should depreciation be accounted for in public-school buildings? *School and society*, 34: 870-73, December 26, 1931.

A philosophical discussion. In some States school boards are forbidden by law to set up reserves for depreciation over a long period of time.

AIDS

(See State Aid, Buildings)

COSTS, CITIES, INDIVIDUAL

(See Building Finance, Cities, Individual)

COSTS, ECONOMIES

AMBROSE, W. C. Low cost fireproof school construction of San Francisco. With data cost. *American architect*, 135: 107-13, January 20, 1929.

BETELLE, JAMES O. Ways and means of increasing school facilities in times of business depression. *American school board journal*, 84: 29-31, 68, January 1932.

Discusses increased utilization of existing plant, minor changes and alterations, additions, and new construction.

— What an architect does for his money. *American school board journal*, 80: 37, January 1930.

A check list which will enable school superintendents to know what services they may reasonably expect from the architect in the construction of a school building. Outlines the architectural activities commonly involved in preliminary work, bids and contracts, and erection of the building. Discusses "instruments of service" and analyzes the architect's costs and profits.

- Detroit. MOORE, S. P. Detroit lowers its school costs. *American school board journal*, 82: 56, February 1931.
- Discusses the concentration of interest by Detroit school authorities on the economical construction of a group of elementary school buildings. Gives the amount of reduction in cost, from year to year, on the per-pupil basis, and a detailed description of the material used.
- Economies in school building construction. *American school board journal*, 68: 61, 132, May 1924.
- ENGELHARDT, FRED and STEEL, H. J. Efficient use of school buildings. *Minneapolis, Minn., University of Minnesota*, 1926. p. 16. (University of Minnesota. Bulletin, no. 29, June 1926.)
- GANDERS, H. S. Planning the modern school building from the standpoint of operation and maintenance. In National education association. Department of superintendence. Official report. *Washington, D. C., National education association*, 1931. p. 223.
- HART, F. W. and PETERSON, L. H. Economies in schoolhousing; pupil use of blackboards in junior and senior high schools. *American school board journal*, 73: 42, 153, July 1926.
- Computes the cost of installing blackboards which are not used by investigating practices in 294 regular and special class rooms in junior and senior high schools.
- HOLMES, W. S. The cost-plus system of letting contracts for schools. *American school board journal*, 76: 75, 162, January 1928.
- HOLY, T. C. Economies resulting from schoolhouse planning. In National association of public-school business officials. Proceedings of the fourteenth annual meeting, 1925. p. 40-48.
- HOPKINSON, G. M. Economies in Cleveland school budget plans. *Architectural forum*, 37: 2, 81-84, August 1924.
- How one school saved \$265,000 on its building program. *Nation's schools*, 6: 88, September 1930.
- HUEBER, PAUL. Beauty and economy are on a par in these three parochial schools. *Nation's schools*, 3: 35, January 1929.
- HUNTER, FRED M. Efficient expenditures of school moneys. *American school board journal*, 76: 43-44, May 1928.
- ITTNER, W. B. High costs and sane economies in the building of schools. *Elementary school journal*, 24: 365-67, January 1924.
- JOHNSON, VIRGIL L. An achievement in school construction. *American school board journal*, 76: 60-66, January 1928.
- Outlines the details of standardization and construction which has enabled Philadelphia to construct thoroughly modern fireproof buildings at costs as low as \$253 per pupil without sacrificing architectural beauty.
- LARCOMB, CHARLES M. Economy of public-school property. *Journal of education*, 103: 703, June 24, 1926.
- LENHBACK, HENRY G. Economy in the planning and construction of school buildings. *American school board journal*, 84: 49, 106, 108, 110, January 1932.
- An architect sets forth certain economies which may be effected by careful inspection of the innumerable details that go to make up a complete design.
- MACCORMACK, W. R. Excessive school-building costs. *American school board journal*, 75: 51-52, 146, July 1927.
- McGEE, H. G. The capacity use of school buildings. *American educational digest*, 48: 147, December 1928.
- Minneapolis school authorities reduce cost of building 50 per cent per cu. ft. *The Tax Digest*, March, 1926, p. 85-86. *California Taxpayers' Association, Los Angeles*.
- An account of Minneapolis' savings in school building construction and maintenance based on improved plans.
- MOEHLMAN, ARTHUR B. Disposing of the present plant. *Nation's schools*, 8: 86, 88, 90, August 1931.
- Analyzes appraisal, replacement, finance, and abandonment in connection with the whole plant program. Suggests a schedule for building elimination based on factual data.
- Financing the school plant program economically. *Nation's schools*, 8: 76, 78, 80, 82, November 1931.
- Discusses the expense of the ultimate plant and explains definite procedures that will effect economies.
- When remodeling is profitable. *Nation's schools*, 4: 43, November 1925.
- PUGH, JESSE J. Efficiency in the use of a school building. *Educational research bulletin, Columbus, Ohio*, 8: 89-94, March 6, 1929.
- Examines the plan for utilizing a school building to determine its efficiency. Includes such questions as, number of rooms occupied each period, comparison

of utilization of building as a whole to that of each room, use of rooms for special classes or purposes, and percentages of pupil space occupied in each room throughout the day. Recommends plan which will keep space occupied.

ROBERTS, H. C. Making new school buildings out of old. *American school board journal*, 84: 55-56, 110, January 1932.

Significant methods in economizing on construction by rehabilitating old buildings. Discusses problems of altering and modernizing these structures so as to preserve them for years of future service.

School contracts—lowest responsible bidder. *American school board journal*, 80: 77-78, February 1930.

SHIGLEY, ARTHUR R. A school building unit and how it simplifies construction. *Nation's schools*, 9: 57-60, February 1932.

Explains how organized and systematic methods of assembling the various structural elements may become definite and material factors in lowering construction costs.

SMITH, HENRY LESTER and NOFFSINGER, FOREST RUBY. First supplement to the bibliography on school buildings, grounds, and equipment—August 1927 to April 1932. Vol. IX, nos. 1 and 2, September-November 1932. (Scheduled for bulletin of the school of education of Indiana university.)

Will contain sections on economies in the building program, standardization of school buildings and equipment, and status of building operations.

STETSON, P. C. Economies in school building construction. *American school board journal*, 68: 62-64, January 1924.

STRAYER, G. D. and ENGELHARDT, N. L. School building problems. *New York, N. Y., Teachers college, Columbia university*, 1927. p. 295-326.

These pages refer to the problems involved in the practice of economy in school-building construction from the standpoint of type, design, plans and specifications, mechanical equipment, and construction supervision technique.

TAYLOR, C. STANLEY. Economical concrete floors for school buildings. *Nation's schools*, 1: 41, June 1928.

THOMAS, OREN R. A complete low-cost school. *American school board journal*, 80: 60, February 1930.

— Where every inch of space does double duty. *Nation's schools*, 7: 47, February 1931.

TURNER, J. M. Factors determining the size of a high school. *American*

school board journal, 76: 46, January 1928.

This paper reviews opinions of educators, survey findings, architect institute opinions, and city systems experiences relative to the correct size for a high school. The author concludes with summary of factors thus found. Mass education lowers per capita expense but there is a noticeable slump in the quality of the product put out and of teaching. Other factors such as health, transportation, curricula to be administered, and time lost in class shifts enter the problem.

WADE, JEAN. The schoolroom floor and how to select it. *American educational digest—School executives magazine*, 48: 109, November 1928.

WEEKS, A. L. Economy in school building construction. *American school board journal*, 71: 57-64, September 1925.

WHALIN, W. E. How Oakland builds its public schools. *The tax digest*, November, 1929, p. 364; *California taxpayers' association*, Los Angeles.

The large savings effected by Oakland in school-building construction due to standardized requirements, adequate planning, and supervision by the building superintendent amounted to about 20 per cent.

WOMRATH, GEORGE F. School business administration. *American school board journal*, 78: 37, April 1929. (See also the June, July, August, September, November, and December 1929, the January, February, March, May, June, July, August, September, October, November, 1930, and February and March, 1931, numbers for other articles of series.)

Presents the superintendent's responsibilities in connection with school building construction, mechanical and educational equipment, landscaping, insurance, supplies, rehabilitations, and cost analysis of school building programs. The articles appear under four major headings: (1) Selection of sites for school buildings. (2) Educational specifications for school buildings. (3) Architectural designs, plans, and specifications. (4) School building-construction economies. The series begins with an introductory article in Volume 78 (April, 1929). Three articles entitled "Selection of sites for school buildings" appear in June, July, and August numbers; three articles on "Educational specifications of school buildings" appear in September, November, and December of the same year; "Architectural designs, plans, and specifications" are discussed in the four issues for January, February, March, and May, 1930, and the February, 1931, numbers. The series ends in the March number with a brief history of education business theory during the past 40 years.

WOOD, FRANK H. Can school building costs be lowered without lowering standards? *American school board journal*, 84: 49-50, February, 1932.

Lower building costs can be attained only by the most careful planning and

supervision by competent architects and consultants. Suggests solving of the problem by increased utilization of existing facilities.

COSTS, ESTIMATING

BARR, JAMES A. Budgeting a school building and equipment program. *Sierra educational news*, 20: 386-88, June 1924.

BARROWS, ALICE. The school building program and estimated cost of same. In National advisory council on school building programs. *Washington, U. S. Government printing office*, 1930. p. 13-17. (U. S. Office of education. Pamphlet, no. 7, July 1930.)

COOPER, F. I. Estimating the cost of a building. In Report of a committee on schoolhouse planning. *Washington, D. C., National education association*, 1925. p. 140-43.

Method for estimating cubic-foot building cost when certain constants are determined. Tables for local costs and calculations based on recent school buildings contracted for in Boston.

DALMAN, M. A. Problem of housing schools; needs, finance, and education program worked out in brick and steel. *American school board journal*, 80: 64-65, April 1930.

ENGELHARDT, N. L. and ENGELHARDT, FRED. Planning school building programs. *New York, N. Y., Teachers college, Columbia university*, 1930.

Chapter XVI, p. 388-431 deals with variables which influence school building costs. Tables show the variation in cost for various divisions of construction of buildings of different capacities within the same State. Variation of costs of school building construction in various cities throughout the United States.

Pages 432-48 discuss factors affecting the value of land which is to be purchased for a school site. Shows the relation between the cost of site and cost of building for certain schools in New Jersey as typical.

General contractor in schoolhouse construction. *American school board journal*, 78: 65, March 1929.

HOLY, T. C. and DAVIS, H. H. Method of determining expenditures required to maintain the status quo of school plants. *American school board journal*, 74: 45-46, June 1927.

Presents 10 steps of applying a technique for determining the expenditures required to maintain the status quo of school plants, by use of an index of construction costs and an investigation of the average age at which school buildings are replaced, which is found to be about 45 years.

IRONS, G. E. Anticipating the future in building programs. *Educational*

research bulletin, *Ohio State university*, 4: 92-96, March 1925.

JONES, REUBEN W. A building program for city schools. *American educational digest*, 44: 150, December 1924.

MILLIGAN, R. M. The proper method of figuring building costs and capacities. In National association of public school business officials. Proceedings of the thirteenth annual meeting, 1924. *Trenton, N. J., MacCrellish and Quigley co.*, 1924. p. 67-68.

MOEHLMAN, ARTHUR B. Comparative building costs. *Detroit educational bulletin*, 7: 10-11, 1923.

A comparison of actual costs in budget of 1923-24, with amounts asked for in 1924-25. Details comparisons by classifications.

MORSE, H. N., and ANDERSON, C. D. Methods of computing and comparing school building costs. In *The American school and university*. *New York, N. Y., American school publishing corporation*, 1929-30. p. 22-25.

Compares methods of computing school building costs (per pupil based on the maximum pupil capacity, per square foot of usable floor space, and per cubic foot) for the purpose of estimating new building construction. Comparative data arranged in tabular form for 228 school buildings (elementary and high-school buildings) give the median cost per pupil, median cost per square foot, and the median number of square feet per pupil in the various types and sizes of school buildings. Fifteen typical examples of detailed description and cost data for buildings of various sizes and types.

COSTS, GENERAL

ALLEN, A. T. County-wide school planning. *High-school journal*, 6: 183-84, November 1923.

ALMACK, J. C. Building surveys and measurements. *American school board journal*, 70: 52-54, January 1925.

BELL, A. H. Depreciation and cost. In National association of public-school business officials. Thirteenth annual proceedings, 1924. p. 52-60.

A discussion of school costs as shown in school property value estimated in three ways: (1) original cost, (2) replacement, (3) present value demonstrating that depreciation is a basic expense. Tables of estimated annual depreciation of various equipment given.

CLARK, H. F. and BUBOS, O. K. School building index. See Monthly numbers of *School executives magazine* in 1930.

— and **FOWLKES, J. G.** Index of school building and school supply

- prices. See monthly numbers of *Nation's schools* up to June 1930.
- DORMAN, G. E.** School construction costs. *American school board journal*, 80: 68-69, January 1930.
- ENGELHARDT, N. L.** Buying school buildings. *American school board journal*, 82: 49-51, January 1931.
- Discusses the preparation of school building specifications, adequacy and character of the working drawings, checking of specifications, and gives a detailed check list for checking school building plans as a means of insuring a school board an efficient building for the money it spends.
- and **ENGELHARDT, FRÉD.** Public-school business administration. *New York, N. Y., Teachers college, Columbia university*, 1927. p. 790-93.
- Expenditures for school buildings.** *School and society*, 22: 222, August 1930.
- Findings on school building expenditures based on a study of conditions in 14 large cities. School building costs exceed those of all other public works. Data on construction.
- Increase in school-building costs.** *American school board journal*, 75: 51-52, November 1927.
- ITTNER, W. B.** Quarter century in schoolhouse planning and construction. *American school board journal*, 70: 39-42, January 1925.
- MOEHLMAN, ARTHUR B.** Finance needs. In his Public-school plant program. *New York, N. Y., Rand McNally*, 1929. p. 34, 42, 43, 44, 198-99, 208, 294.
- Appraisal of needs in finance policy, present and future, on basis of efficiency of operation and satisfaction of instructional needs, achievement conditioned by community willingness to support program and meet cost. Finance needs, (1) Acquisition of sites, (2) movable equipment, (3) site development. Future needs, (1) specific needs of schools for maintenance, (2) incurred expenditure for capital improvement.
- MORRISON, HENRY C.** The management of the school money. *Chicago, Ill., University of Chicago press*, 1932. p. 70-146.
- An original theoretical treatment with practical illustrations of the costs involved in providing buildings and equipment, in depreciation, in extension of the plant, and in the use of capital reserve.
- New Jersey.** A survey of public school buildings in New Jersey. *Trenton, N. J., Department of public instruction*, 1928. 253 p. (New Jersey Education bulletin, vol. 15, October 1928.)
- Similar figures are issued annually in the department's Education bulletin, traceable through the index at the end of each volume.
- Proportion of costs—Current and building.** *American school board journal*, 77: 82-84, October 1928.
- News items about buildings and current expenses from many states. Includes chart showing distribution of school building costs.
- Representative school building programs.** *Sierra educational news*, 21: 295-97, May 1925.
- RICE, THURMAN B.** The cost of an old schoolhouse. *Indiana teacher*, 71: 28, November 1926.
- Discusses excessive repairs and fuel consumption, strained eyes, illis arising from poor ventilation, the thwarting of youthful enthusiasms for education, the repulsion of good teachers, discouragement of community growth, and the apathy of a community of human beings, as costs which must be attributed to the maintenance of an old school building.
- SEARS, J. B.** Some data on the cost of school housing. *American school board journal*, 68: 42-44, June 1924.
- SMITH, HENRY LESTER and NOFFSINGER, FOREST RUBY.** First supplement to the bibliography on school buildings, grounds, and equipment—August 1931 to April 1932. Vol. IX, nos. 1 and 2, September-November 1932. (Scheduled for bulletin of the *school of education of Indiana university*.)
- Will contain a section on building costs.
- U. S. OFFICE OF EDUCATION.** National advisory council on school building problems. Washington, *U. S. Government printing office*, 1930. p. 13-15. (U. S. Office of education. Pamphlet No. 7.)
- Outlines various school building problems including finance and gives methods for estimating the cost of building programs and determining type of buildings to be planned, considering the fiscal status of the district.

COSTS, HIGH SCHOOLS

- PROFFITT, MARIS M.** Costs of buildings, equipment, and sites of vocational high schools. In Industrial education section of the survey of Buffalo public schools. *Washington, U. S. Government printing office*, 1931. p. 28 (table 25) (U. S. Office of education. Pamphlet No. 17.)
- This study contains only tabulations of vocational school salaries, building and equipment costs for the city of Buffalo during the period 1929-1931.
- Wide range in high-school costs.** *School*, 42: 3, September 4, 1930.
- Per pupil costs of large high-school buildings in New York City, Buffalo, Toronto, Detroit, and Chicago are found to range from \$657 to \$1,750. Actual costs are tabulated.

COSTS, JUNIOR HIGH SCHOOLS

BORDEN, W. W. Buildings and equipment for junior high schools. *American school board journal*, 68: 47-48, April 1924.

ITTNER, W. B. Junior-senior school at pre-war cost. *American school board journal*, 74: 61-62, January 1927.

Points out that lack of skill in planning for specific educational purposes and the too elaborate use of expensive building materials are contributing causes of costly school buildings. Cites the Woodrow Wilson junior-senior high school, Beckley, W. Va., as an example of sane economy in planning and construction.

PROCTOR, W. M. and RICCARDI, NICHOLAS. The Junior high school—its organization and administration. *Stanford university, Calif., Stanford university press*, 1930. p. 15-17.

Brief discussion of gross building costs for junior high schools in terms of type of building desired and special considerations relative to locality. Supervision of construction is essential.

TERRY, P. W. Providing adequate housing accommodations for the junior high school. *School review*, 32: 13-26, January 1924.

COSTS, MAINTENANCE AND OPERATION

See Maintenance Costs and Operation Costs

COSTS, STATISTICS

See also Building Costs, General; Property Value for Schools, Statistics

[Statistics on costs of school buildings are no longer issued by themselves except by a few State departments, notably in New Jersey. Certain construction companies issue building costs for all buildings for their sections of the country. The American Appraisal Company of Milwaukee, Wis., prepares such statistics monthly, classified by types of buildings and sections of the country. These are not available for unlimited distribution but may be obtained under certain conditions.]

Building construction in the universities, colleges, and schools of the country. *School and society*, 33: 264-65, February 21, 1931.

Report of a survey which reveals that 81 institutions of higher learning plan the expenditure of more than \$98,000,000 for building construction during 1931. Investigation reveals that elementary and secondary schools will spend over \$208,000,000 for the same purpose during 1931.

NORRON, J. K. Building construction. Statistics of expenditures in the several states for 1928. *Washington*,

D. C., National education association, 1930. p. 178. *Research bulletin*, vol. 8, no. 4, September 1930.

Statistics of expenditures made for building construction in the various States and the entire United States in 1928. National expenditures were \$7,065,000,000.

FINANCE, CITIES, INDIVIDUAL

See also City School Finance, Surveys

Berkeley, Calif. SEARS, J. B. Berkeley school properties. *Berkeley, Calif., Board of education*, 1926. 195 p.

Canton, Ohio. DELP, I. W. A survey of the secondary school-building facilities of Canton, Ohio, for the determination of needs of readjustment and expansion. *Canton, Ohio, Board of education*, 1931. 95 p., tables, diagrams, maps.

Survey made because of the rapid growth of the school population as well as the growth of the city by the principal of one of the high schools. He presents a comprehensive plan for the guidance of the board of education in the future.

Cedar Rapids, Iowa. Cedar Rapids school plant program, 1924. *Iowa City, Iowa, University of Iowa*, 1924.

Davenport, Iowa. School plant program for Davenport. *Iowa City, Iowa, University of Iowa*, 1925.

Detroit, Mich. RIGHTOR, C. E. How Detroit's 10-year financial program was prepared. *National municipal review*, 15: 108-14, February 1926.

Dodge City, Kans. O'BRIEN, F. P. School survey and building program for Dodge City, Kans. *Lawrence, Kans., University of Kansas*, 1923. p. 70-71, 73-78, 80-98.

Eureka, Calif. Eureka school-building survey. *Eureka, Calif., Board of directors*, 1924.

Grosse Pointe, Mich. MOELHMAN, A. B. School-building survey. *Grosse Pointe, Mich., Board of education*, 1927.

Hamtramck, Mich. Finance. In Housing of the children. *Hamtramck, Mich., Board of education*, 1926. p. 81-86.

A thorough study of the building finance problem in a community that can easily provide for its building needs, with the bulk of the tax money coming from nonresident property owners.

Hillsdale, Mich. MOELHMAN, A. B. and ERICKSON, J. E. School-building survey. *Hillsdale, Mich., Board of education*, 1927.

Lansing, Mich. OTTO, C. W. Building schools without bonds. *American city*, 42: 97-98, June 1930.

Points out interest savings possible by construction of school buildings from current funds. Gives general conditions and the statistics contributing to the success and economy of such a plan in Lansing, Mich.

Marietta, Ohio. Building program for Marietta, Ohio. *Columbus, Ohio, Ohio university*, 1924. (Bureau of educational research. Monograph, 1924, no. 1.)

Marshalltown, Iowa. School-building program, 1925. *Iowa City, Iowa, University of Iowa*, 1925.

Marysville, Calif. SEARS, JESSE B. Marysville union high school. A report of an investigation of the physical needs of the school and a plan for financing the proposed program of development. *Marysville, Calif., Board of education*, 1925. p. 15-20, 22-23, 30-33, 35-40.

Milwaukee, Wis. School-building program, 1924. *Milwaukee, Wis., Board of education*, 1924.

Ottawa, Kans. School-building program. *Lawrence, Kans., University of Kansas*. (Bureau of school service series.)

Pontiac, Mich. HARRIS, JAMES H. and ITTNER, WILLIAM B. Pontiac complete balanced building program. *American school board journal*, 83: 41-45, 92, October 1931.

Describes a striking example of modern schoolhouse planning. Layouts and illustrations indicate definite educational policies. Functional grouping is noticeable in all departments.

St. Joseph, Mo. School-building survey. *St. Joseph, Mo. Board of directors*, 1923.

School-building program. *Journal of the National education association*, 12: 24, 110, 223, January, March, June, 1923.

School-building programs. *Elementary school journal*, 23: 483-85, March 1925.

Solvay, N. Y. School-building program for Solvay, N. Y. *Board of education*, 1923.

SORENSEN, R. R. How the Tracy school district financed a building program. *American school board journal*, 84: 49, March 1932.

The experience of a small school district in creating a building fund over a period of years to supplant a bond issue.

Syracuse, N. Y. SMITH, HARRY P. A 10-year school-building program for Syracuse, New York, 1930-1940. (Board of education report) *Syracuse, N. Y., Board of education*, 1930. 106 p.

Presents a detailed analysis of the character of the city, the school organization policy, the status of the existing plant, the program of education, the immediate and ultimate school building needs, and methods of financing the program proposed.

The school-building program of Syracuse, N. Y. *American school board journal*, 82: 86-87, 140, 142, May 1931.

A summary of the planning of a school-building program in a typical American city. The major factors involved are briefly discussed. Methods and technique are described in the text and maps are included to show location of schools and population trends.

Summary of 10-year school-building program for Syracuse, N. Y., 1930-1940. Board of education report. *Syracuse, N. Y., Board of education*, 1930. 32 p.

This survey is significant as an illustration of the type of scientific investigation essential to sound school-building programs. It presents the outstanding factors and problems that must be studied and solved.

White Plains, N. Y. School-building program for White Plains, N. Y. *Board of education*, 1923.

FINANCE, GENERAL

See also Capital Outlay

BAKER, DONALD M. Financial planning in local government. *Tax digest*, 6: 65, February 1928.

BRIGGS, HERBERT B. Public-works regulations, policies, and practices as applied to school buildings. *American school board journal*, 82: 60-68, 142, 144, 146, January 1931.

An analytical study of the effects of limitations and restrictions placed upon school boards by public works regulations with reference to the construction and equipping of schoolhouses. Numerous cases to illustrate the point in question. Favors safe minimum rather than rigid maximum requirements.

CHILDS, L. Right to reimbursement of persons advancing money for school buildings. *American school board journal*, 81: 36, October 1930.

Presents the difficulties commonly met by school board members who advance money to meet financial emergencies and outlines the technical points in court decisions concerning such informal loans. Warns board members to be cautious in making personal loans.

COOK, D. H. Educational engineering. *American school board journal*, 78: 49, April 1924.

ENGELHARDT, N. L., and ENGELHARDT, FRED. Planning school-building programs. *New York, N. Y., Teachers college, Columbia university*, 1930. p. 449-82.

This chapter (XVIII) deals with the method of financing and the cost of school-building programs. Data show the relationship between total payments for public schools in continental United States and capital outlay (1924-25 and 1925-26). Variations in per cent of capital outlay to total expenditures for schools in the various States.

GWINN, J. M. Our chief concerns with the future school-building program. In *National education association*. Department of superintendence. Official report, 1929. *Washington, D. C., National education association*, 1929. p. 31-38.

HENZLIK, FRANK E. Rights and liabilities of public school boards under capital outlay contracts. *New York, N. Y., Teachers college, Columbia university*, 1924. 118 p. (Teachers college, Columbia university. Contributions to education, no. 153.)

HOPKINSON, GEORGE M. What quality school building? *American school board journal*, 82: 35-38, 132, 134, January 1931.

A complete and detailed statement of a study to determine how much more it costs initially to build well as compared with a medium quality and a poor quality building, when providing the same educational requirements and lay-outs. Construction details and total costs for each of the three grades of buildings are included.

Law and administration. *Journal of higher education*, 2: 195-203, April 1931.

Sets forth some court decisions dealing with the administration of college dormitories, with reference to the means of financing construction, the maintenance of proper discipline therein, and the tort liability of the institution for injuries to students resulting from housing conditions.

MOEHLMAN, ARTHUR B. Location and use as factors in plant appraisal. *Nation's schools*, 8: 78, 80, 82, June 1931.

Sets up principles and techniques for the appraisal of the school plant as they relate to location, site, and utilization. Discusses the final appraisal of the school plant to determine immediate and gradual eliminations and the nucleus around which the future plant will be developed.

NOWAK, JOSEPH W. Legal requirements governing bids for school buildings. M. A. thesis, 1931. *University of Wisconsin, School of education, Madison, Wis.*

PARKER, H. M. School-building funds raised in novel way. *American school board journal*, 69: 44, 147, July 1924.

Describes a high-school association organized as a corporation under a legal State charter to provide funds for the construction of a \$200,000 building and the renting of same to the school board which had previously assumed its legal limit of bonded debt.

PITTENGER, BENJAMIN F. An introduction to public-school finance. *New York, Houghton Mifflin co.* p. 152-55.

PROCTOR, A. M. Safeguarding the school board's purchase of working drawings. Thesis. *New York, N. Y., Bureau of publications, teachers college, Columbia university*, 1931. 138 p.

A doctor's dissertation which develops techniques whereby school authorities without a technical knowledge of architecture may intelligently evaluate working drawings for school buildings. Useful for school architects in checking the work of draftsmen for adequacy and completeness. A valuable guide of State departments of education in planning and administering the work of the division of school housing.

REEDER, WARD G. Measuring the ability of a community to finance a school-building program. *American school board journal*, 71: 65, November 1925.

The fundamentals of public-school administration. *New York, N. Y., Macmillan co.*, 1930. p. 201-05.

Selection and purchase of school sites. *American school board journal*, 71: 66, December 1925.

SMITH, HENRY L. and CHAMBERLAIN, LEO M. A bibliography of school buildings, grounds, and equipment. *Bulletin of the school of education, Indiana university*, vol. 4, no. 3, January 1928. *University of Indiana, Bloomington, Ind.*

Contains 2,263 annotated references on the field published between 1912 and 1928. Financial references can be located in index under headings enumerated in Smith and Noffsinger reference.

and NOFFSINGER, FOREST RUBY. First supplement to the Bibliography on school buildings, grounds, and equipment. Vol. IX, nos. 1 and 2, September-November 1932. (Scheduled for bulletin of the school of education of Indiana university.)

Will contain 2,800 briefly annotated references from August, 1927, to April, 1932, with a few exceptional items, before August, 1927, to extend the original bibliography, covering all phases of

school buildings including higher institutions and private schools. Financial topics include: Building costs, the ability of the community to finance the building program, school bonds and other methods of financing the building program, economies in the building program, standardization of school buildings and equipment, the maintenance of buildings and equipment, insurance and depreciation, status of building operations.

SMITH, HARRY P. Business administration of public schools. *Yonkers-on-Hudson, N. Y., World book company, 1929.* p. 361-79.

This chapter classifies school bonds, presents methods for financing capital outlay, notes trends in school bonded indebtedness, devises measurements of a city's ability to finance capital-outlay programs, discusses publicity programs in relation to marketing and retirement of school bonds, points out advantages of serial bonds, and evaluates various plans of financing capital-outlay programs.

TRUSLER, H. R. Illegal and legal use of school property. *In his Essentials of school law. Milwaukee, Wis., Bruce publishing company, 1927.* p. 322-44.

An examination of school laws and court decisions regarding the legality of public performances in schoolhouses, use of schoolhouses for teachers' residences, superintendents' use of school buildings, combinations of business property and schoolhouses, use of private property for school purposes, sale of school supplies for profit, lease of school lands for business or amusement purposes, and the lease of school buildings for private schools or religious purposes.

What must the school-building dollar yield? *American school board journal, 78: 66, February 1929.*

When school finances fall; how a Pennsylvania town provided a needed high school. *American school board journal, 73: 94, August 1926.*

How the citizens of Point Marion, Pa., organized a private holding company under a legal State charter and issued \$188,000 worth of bonds to finance the construction of a school building, and how the building was rented at a rate which would pay the interest and retire the bonds upon maturity to the school board which had previously assumed its legal limit of bonded indebtedness.

WYNKOOP, JOHN B. Financing new school construction. *School executives magazine, 50: 8-10, 41, September 1930.* Also in National association of public school business officials. Proceedings, 1930. p. 200-9.

Defines bonded indebtedness and evaluates the serial bond, the pay-as-you-go plan, and contingency funds as methods of financing school-building construction. Appraises the value of education as a social investment and proposes the standardization of school facilities as a means of economy.

FINANCE, PUBLIC RELATIONS

See also Borrowing, School, Public Relations

JONES, R. W. A building program for city schools. *American educational digest, 44: 150-52, December 1924.*

Develops the thesis that a city school system should have a building program which includes planning for the future, expert advice, legitimate publicity methods, and reasonable projects approved by the public. Such a plan should be based on a survey of existing schools, population, trend of growth, topography of the district, ultimate plans including educational programs, and funds available or to be submitted as a proposed bond issue to meet the cost of the proposed buildings.

REEDER, WARD G. Measuring the ability of a community to finance a school-building program. *American school board journal, 71: 65, 126, December 1925.*

— Measuring the ability of a community to finance a school building program. *In School buildings, by T. C. Holy.* p. 184-98.

Selling a school building to a community. *American school board journal, 69: 125, October 1924.*

SHIGLEY, ARTHUR R. Acquainting the layman with school-building costs. *Nation's schools, 5: 39-40, March 1930.*

STOCKINGER, W. A. Moulding public opinion into action. *American school board journal, 69: 56-57, 147, July 1924.*

FINANCE, STATES, INDIVIDUAL

Delaware. **DUPONT, PIERRE S.** How Delaware can finance a State school-building program. *Wilmington, Del., Delaware school auxiliary association, [n. d.] 59 p.* (Bulletin of the service citizens of Delaware. Vol. 6, no. 3.)

Delaware's remarkable school-building program. *American school board journal, 70: 47-48, February 1925.*

Discusses in detail a legislative proposal to secure \$9,700,000 for school-building purposes in Delaware.

New York State. Construction of school buildings in the towns and smaller cities of New York. Report of the special joint committee on taxation and retrenchment. *Albany, N. Y., The Committee, 1929, 80 p.* (Legislative document, no. 60, 1929).

Careful study of "the apparent extravagance in the building programs of school districts." Describes present

status and makes specific recommendations for both immediate and ultimate substantial economies without curtailing the educational offerings or preventing attractive and distinctive buildings.

North Carolina. BERRY, WILLIAM J. School building loan funds in North Carolina. *American school board journal*, 71:77, September 1925.

FINANCE, SURVEYS

See Building Finance, Cities, Individual; City School Finance, Surveys

BUSINESS EDUCATION

See Commercial Education

BUSINESS MANAGEMENT

GENERAL

See also Economies, General; Safe-guarding Funds

ALEXANDER, CARTER. Organization for the coordination of business and professional services. *American school board journal*, 80:39, March 1930.

From an investigation of cities of various sizes this article reveals conflicts between the business and professional workers of school staffs, and suggests activities on the part of superintendents, business managers, and educational associations which will tend to coordinate the activities of all school workers.

— and others. Review of finance and business management researches. In Review of educational research, finance and business management. Washington, D. C., National education association, 1932. (In press).

Covers 1923 to fall of 1931 with running review and a selected bibliography for each chapter. Includes chapters on public-school accounting, public-school budget, finance and business management of higher institutions, fiscal control and textbooks in business management of schools and financial economies.

BEVERIDGE, JOHN H. The superintendent's responsibility for school business administration—abstract. In National education association, Department of superintendence official report, 1932. Washington, D. C. 1932. p. 239-40.

BROOKS, E. C. Taxpayer's idea of school business administration. *School executives magazine*, 49:553-55, August 1930.

Analyzes school costs in relation to school efficiency in North Carolina. Examines local administrative problems, borrowing practices, State laws and methods of business administration, and suggests constructive improvements. Takes "educational factors" into account and justifies rising educational costs.

BRUNSTETTER, MAX R. Business management in school systems of different sizes: a study of certain aspects of business management in nine New Jersey cities. *New York, N. Y., Teachers college, Columbia university*, 1931. 135 p. (Teachers college, Columbia university. Contributions to education, no. 455.)

Compares the business management in three large school systems, three medium-sized ones, and three small ones in New Jersey. In an attempt to show their differences in business procedure, and the reason for such differences. Especially good for criteria.

BUFFALO MUNICIPAL RESEARCH BUREAU, Inc. Report of the Buffalo school survey. Part II. *Buffalo, N. Y., Buffalo municipal research bureau, inc.*, 1930. 230 p.

A thoroughly businesslike volume on the business administration and the building aspects of the Buffalo public schools. Some sections that have rarely been handled in surveys are included here, such as the selection and purchase of school sites, bonds for employees and nonresident tuition. This volume should be very helpful to all workers in this field.

Current practices and procedure relating to financial responsibility and accountability of public officials. *University of Minnesota, Minneapolis*, 1925. 125 p.

Unpublished Master's thesis.

DOUGLAS, H. P. Business management of a small city school system. *American school board journal*, 70:47, March 1925.

ENGELHARDT, FRED. Business administration, Ortonville public schools. *Minneapolis, Minn., University of Minnesota*, 1927. 50 p. (University of Minnesota. Bulletin, vol. 30, no. 67, 1927. College of education. Education monograph, no. 15, 1927)

ENGELHARDT, N. L. Some general implications for school business administration arising out of the present economic conditions. In Proceedings of the National association of public-school business officials, 1931. p. 44-45. *Trenton, N. J., National association of public-school business officials*, 1931.

A comprehensive and challenging survey of the past, present, and future of public-school business administration. Reviews the earlier efforts on the improvement of techniques as the center of attention which is being replaced by problem analysis.

— Some general implications for school business administration arising out of the present economic conditions. In proceedings of the twentieth annual meeting of the

National association of public-school business officials, Richmond, Va., May 19-22, 1931. Trenton, N. J., MacCvrellish and Quigley Co., 1931. p. 44-55.

— What is efficient school business administration? *American school board journal*, 80:41, May 1930.

Rates numerically methods of business management in several school systems, according to the character of their practices, upon uniformity and efficiency of practices. Gives examples of each grade of system, indicating its strong and weak points.

— and ALEXANDER, CARTER. School finance and business management problems. *New York, N. Y., Bureau of publications, Teachers college, Columbia university*, 1928. xv, 526 p. tables, diagrams.

More than a hundred problems covering all the important phases of the field. The set-ups, assignment, and references will be helpful to school authorities facing similar problems.

— and ENGELHARDT, FRED. Public-school business administration. *New York, N. Y., Teachers college, Columbia university, Bureau of publications*, 1927. 1,068 p.

Presents a complete and comprehensive treatment of the organization and management of public-school business administration from the standpoint of sources of income, care and management of school and property funds, and a proper distribution of expenditures of the school fund. Comparisons with business organization and administration.

— Property management in local school systems. *Teachers college record*, 28:481-503, January 1927.

A general treatment of property management in local school systems. Discusses property values, service values of educational property, classification of school property, difference between equipment and supplies, factors underlying plant management, responsibilities for management, specialization in services, property standards, school-building standards, standards for classroom equipment, uses of school property, reuse and multiple use, educational service use of buildings, multiple use of classrooms, maintenance and operation programs, maintenance budget, and property inspection.

GADD, C. A. How Detroit manages the business problem of the public school. *American school board journal*, 82:58, February 1931.

Outlines the major business functions which come under the direction of the business manager of the Detroit public schools. Gives total expenditures for various divisions of cost, such as school construction work, employment service, building maintenance, heating and ventilating service, and purchasing operations.

Hamtramck, Mich. BOARD OF EDUCATION. Finance procedures; techniques in accounting, budgeting, and service of supplies of the Hamtramck, Mich., public schools prepared for the Board of education. *Hamtramck school district*, 1928. 162 p.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter II. General administrative procedures and control. *University of Nebraska, extension division, Lincoln, Nebr.* 1932. p. 9-19, 168-71. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)

Practical suggestions and citations from authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

JOB, LEONARD BLISS. Business management of institutional homes for children. *New York, N. Y., Teachers college, Columbia university*, 1926. 205 p. (Teachers college, Columbia university, Contributions to education, no. 215.)

— REEDER, WARD G., and HECK, A. O. The school clerk and his records. *Bloomington, Ill., Public school publishing co.*, 1931. 80 p.

A valuable handbook to give the school clerk professional assistance similar to that now available for superintendents and teachers. Stresses matters found to give school clerks the most trouble, particularly the keeping of financial accounts and records.

PASSANO, LEONARD M. The financial administration of education. *School and society*, 9:527-31, May 3, 1919.

PEEL, A. J. Cutting routine in business manager's office. *American school board journal*, 73:52-53, July 1926.

REEDER, W. G. Business administration of a school system. *Boston, Mass., Ginn and co.*, 1929. 454 p.

Principles and techniques involved in efficient school business management. Gives a detailed treatment of personnel of school business departments and outlines administrative relationships of school organizations. Discusses budget making, school revenues, school finance and supply accounting, sites and buildings, school insurance and inventory, pay-roll procedures and the business administration of rural education and school transportation. Accounting forms supplement the discussions.

— Fiscal control and textbooks in business management of schools. *In Review of educational research. Finance and business administration number*, vol. II, no. 2, April

1932. p. 134-38, 174. *American educational research association, Department of National education association, Washington, D. C.*

Running review and bibliography of researches in this field, stressing those from 1923 to the fall of 1931.

— and HOLMSTEDT, R. W. Financial economies in business management of schools. In Review of educational research. Finance and business administration number, Vol. II, no. 2, April 1932. p. 139-47, 174-80. *American educational research association, National education association, Washington, D. C.*

Running review and bibliography of researches in this field, stressing those from 1923 to the fall of 1931.

SMITH, H. P. Business administration of public schools. *Yonkers, N. Y., World book co., 1929.*

Practically the entire field of school business management receive detailed treatment. The work and organization of school boards; types of municipal control; school budgets; school operation and accounting; financial reports and publicity; construction, maintenance and insurance of school plants, purchasing and supply management and accounting records and forms get constructive and analytical discussion.

— Research in the business management of public schools. *American school board journal, 76: 53-54, March 1928.*

A comparative cost study of 97 cities with more than 30,000 population, of which 52 have the unit type of business administration and 45 have the multiple type. Points out progress and problems and shows the difference between the two types of administration from the standpoint of economy.

— The business administration of a city school system. *New York, N. Y., Teachers college, Columbia university, 1926.* 129 p. (Teachers college, Columbia university. Contributions to education, no. 197.)

SMITH, J. W. Judicial decisions relating to the contractual powers of school boards: (abstracts). *Washington, D. C., National education association, 1929.* p. 20-22. (Department of secondary school principals. Bulletin, vol. 24, January 1929.)

Principles of common law relating to expenditure by school boards based on data obtained from State and Federal Supreme court decisions. The material is classified as (1) general contract construction, (2) contracts relating to property, (3) contracts relating to employees, (4) miscellaneous contractual powers.

THRELKELD, A. L. Methods of financing the schools; the effect of financial organization upon the system.

School executives magazine, 48: 556-58, August 1929:

An examination of the sources of school revenue and recommendations for certain administrative controls. Recommends a unified administration, a survey of expanding educational needs preparatory to budgetary expansion, a budget prepared scientifically and in detail by an expert, and the use of standardized budget forms.

VAN DYKE, G. E. Getting full value in school business management. *American school board journal, 83: 49, 119, 120, September 1931.*

Discusses in the light of local experience as well as the general principles of administration, methods of purchasing equipment and supplies, maintenance of plant, and school-building repairs.

WESTOVER, R. M. Duties of the school business manager; *The tax digest, May, 1931, p. 174; California taxpayers' association, Los Angeles.*

A short account of the place of the school business manager in the educational set-up dealing particularly with budgets, cost accounting, purchasing, inventories, housing plans, and the relations of the superintendent and manager.

PERSONNEL

See also Pay Roll

DUMPHY, J. F. The function of a school board secretary. In National association of public-school business officials. Thirteenth annual proceedings, 1924. *National association publications, 1924.* p. 15-17.

GANDERS, HARRY S. Financial planning and accounting. In Personnel and organization of schools in small cities. *Washington, U. S. Government printing office, 1926.* p. 20-21. (U. S. Office of education. Bulletin, 1926, no. 6.)

HEER, AMOS LEONARD. The present status of business executives in the public schools of the United States in cities with 25,000 or more inhabitants. *Kent State College, Kent, Ohio.*

Ph. D. Thesis, 1926, Ohio State University.

MILLS, H. L. The business manager's responsibility for school business administration—abstract. In National education association. Department of superintendence, official report, 1932. *Washington, D. C., February 1932.* p. 240-41.

REED, C. R. Efficiency in the administrative organization of the school system. *American school board journal, 73: 43-44, July 1926.*

RUSSELL, J. D. Clerical assistant to the superintendent of schools. *American school board journal*, 70: 51-52, March 1925.

U. S. OFFICE OF EDUCATION. The school business manager. In *Certain practices in city school administration*. Washington, U. S. Government printing office, 1927. p. 14. (U. S. Office of education, leaflet, no. 29.)

Authority must center in superintendent's office in order to insure efficiency in the selection of school books and supplies for the school. It is contrary to principle of school administration to divide educational and business administration between two independent executive officers.

CAFETERIA

BIGGS, HOWARD L. and HART, CONSTANCE C. Obtaining food for the lunchroom at the best prices. *Nation's schools*, 9: 57-65, April 1932.

A thoroughly practical treatment illustrated by practice in different cities, particularly in Cleveland.

FORD, WILLARD S. Some administrative problems of the high-school cafeteria. *New York, N. Y., Teachers college, Columbia university*, 1927. p. 57-58, 74-75, 77-80, 89 and chapter VII. (Teachers college, Columbia university. Contributions to education, no. 238.)

These pages cover a financial study of the practice at that date in a number of high-school cafeterias concerning the equipment budget, wages of cafeteria employees, distribution of cafeteria expenditures, average amount spent per pupil, and quality buying.

ACCOUNTING

CALIFORNIA TAXPAYERS' ASSOCIATION (Report No. 200 A). Installation of a Cafeteria Accounting System for the San Diego City Schools. (Los Angeles, February 1932.) 9 pp. ms.

The objective of the study was to determine costs so that cafeteria service could be put on a self-supporting basis. Harold A. Stone, Director of Research, Frank E. Searle, in charge.

CAPITAL ACCOUNTING

See also Building Accounting

MOELHANNON, JOSEPH C. Accounting for the costs of capital in a school program. *Peabody journal of education*, 6: 108-115, September 1928.

Describes the methods of calculating annual depreciation, rent, interest on indebtedness for buildings and sites, and

the annual accrual cost of plant and equipment extensions for the purpose of presenting a procedure of accounting for the depreciation of capital values invested in school buildings and equipment.

MURRAY, G. S. Building depreciation plan for small school system. *American school board journal*, 82: 56-57, April 1931.

Defines depreciation and discusses the purpose of depreciation charges in school accounting. Gives a technique for computing depreciation allowances for the budget, and five principles to assist in estimating and accounting for the depreciation of school buildings.

REEDER, WARD G. Capital outlays. In *his The business administration of a school system*. Boston, Mass., Ginn and co., 1929. p. 185-212.

Chapter 10 discusses methods of financing capital outlay, sale and redemption of bonds, and bond accounting. Presents a long list of publicity techniques and accounting forms and a selected bibliography.

CAPITAL OUTLAY

See also Building Costs

California. Capital outlay economies. *California schools*, 3: 71-72, March 1932. State department of education. Sacramento, Calif.

GROSSNICKLE, FOSTER E. Capital outlay in relation to a State's minimum educational program. *New York. Bureau of publications, Teachers college, Columbia university*, 1931. 68 p.

A study of capital outlay in relation to a State's minimum educational program determined by statistical techniques for the curve of the best fit applied to data from one State. Constant relationship of outlay to current expenses within a defined limit was revealed. Critical evaluation of previously proposed plans by Adams, Baldwin, and Mort is included.

HENZLIK, F. E. Rights and liabilities of public-school boards under capital outlay contracts. *New York, N. Y., Columbia university*, 1924. 118 p.

RICHARDS, W. M., and others. Practical economies in school administration. Chapter IX. Capital outlay. *University of Nebraska, extension division, Lincoln, Nebr.* 1932. p. 133-39, 192-97. (University of Nebraska, publications, educational monograph no. 3. 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Capital outlay costs per pupil in average daily attendance in cities, 1923. *Washing-*

ton, D. C., *National education association*, 1924. p. 38-42, 46. (Research bulletin, vol. 2, nos. 1-2, January, March 1924.)

RESEARCH BULLETIN. School costs and increase in capital outlay. Washington, D. C., *National education association*, 1928. p. 246-48. (Research bulletin, vol. 4, no. 5, November 1928.)

RAINEY, HOMER P. Capital outlays. In his *Public-school finance*. New York, N. Y., *The Century co.*, 1929. Chapters VII, VIII, and IX.

Financing the capital costs of education. *American school board journal*, 73:61-63, 140, December 1928.

STATISTICS

(These will be found in the State and city school statistics bulletins of the United States Office of Education. See *State Statistics; City School Statistics*. The figures show expenditures for new buildings and grounds, and for new equipment. Valuable data also appear in *Financial Statistics of Cities* (latest in print, 1928) and *Financial Statistics of States* (latest in print, 1929) of the United States Bureau of the Census.)

CHILD ACCOUNTING

See *Pupil Cost Accounting*

CITY SCHOOLS

COSTS, GENERAL

See also *Costs*

COOPER, WILLIAM J. Per capita school costs. *American school board journal*, 80:129, January 1930.

Per capita school costs in 95 cities of more than 30,000 in population are tabulated and the extreme variations which exist are revealed. Elementary and high-school enrollment trends since 1920 are based upon the averages of the reports received from 33 States.

DAWSON, HOWARD A. Standards of expenditures for the principal items of city school costs. *Nashville, Tenn., George Peabody college for teachers*, 1927. 173 p. (Contributions to education, no. 31.)

Studies the percentage of the school enrollment in A. D. A., the number of pupils per teacher, percentage of the population 15 to 19 years old in A. D. A. in high school, ratio high-school A. D. A. to elementary-school A. D. A., the percentage of population 7 to 17 years of age attending school, and the drawing power of the high school as measures of the effectiveness of a school program. Assumes that schools which show high achievement along these lines are spending their money well, and by analyzing the methods which secure these results, determines how schools may spend a given amount of money most effectively.

EELKEMA, H. H. Taxation and school costs in cities of more than one thousand inhabitants. *South Dakota educator*, 33:200-3, 206, February 1925.

Illinois. HENRY, N. B. A study of public-school costs in Illinois cities. New York, N. Y., *Macmillan co.*, 1924. 82 p. (Education finance inquiry commission. Report, vol. 12.)

The facts for 1921-22 in 12 cities of more than 10,000 with special study of costs arising from tendency of population to send all children up to 18 years of age to school.

Indiana. TROTTER, RALPH D. Comparative cost of education in sixteen Indiana cities. Ph. M. thesis, 1928. *University of Wisconsin, School of education, Madison, Wis.*

NATIONAL EDUCATION ASSOCIATION. Per cent of municipal funds devoted to schools, 1910 and 1920. *Washington, D. C., Journal of the National education association*, 12:391, November 1923.

Statistical table showing comparison of per cent of municipal funds devoted to schools 1910 and 1920, with cities classified by size.

RESEARCH DIVISION. Why have city school costs increased? *Washington, D. C., National education association*, 1924. p. 14. (Research bulletin, vol. II, no. 1, January 1924.)

Ohio. HARTZELL, MABEL. Public-school costs in a group of Ohio cities data for the school year 1922-3. *Educational research bulletin*, 3:339-46, November 26, 1924.

HOLY, T. C. Financial data for Ohio cities, as of September, 1928. *Columbus, Ohio, Ohio State university, Bureau of educational research*, 1928.

Published also for subsequent years.

HUDSON, C. A. School costs in a group of Ohio villages ranging in population from approximately one thousand to three thousand. *Educational research bulletin*, 5:175-79, April 28, 1926.

School costs in their relation to general municipal costs. *American school board journal*, 76:90, January 1928.

Reveals statistically that the cost of education has not increased any faster than the cost of other forms of public service and contends that all increases are in keeping with the rising standards of American life and the expanded services of government and education.

Study of the per capita cost of city schools. *American school board journal*, 79: 70, September 1929.

Compares per capita costs for 1924-26-28 as found in 250 cities of various sizes of more than 2,500 in population, analyzes per capita costs for functions, lists cities having high per capita costs, and shows the extreme variations.

Virginia. Educational costs in twelve largest cities. *Virginia teacher*, 5: 49, February 1924.

COSTS, INDIVIDUAL CITIES

This Includes Only General Costs. For Cost of Any Phase in a Given City, e. g., Instruction, see That Phase

Anderson, Ind. DENNY, WINFIELD A. A discussion of costs. *Anderson, Ind., Board of education*, 1931. 66 p. (Public-school education bulletin no. 31.)

Includes cost comparisons with 16 other Indiana cities.

Chicago, Ill. HERR, R. How Chicago spends money for schools. *Chicago school journal*, 13: 228-35, January 1931.

Presents a comparative study of the trend in teachers' salaries with the trend in civil service employees' salaries in Chicago city schools from 1912-1929. Data on total expenditures for salaries in tabular form.

— KEEZEL, E. L. Facts and figures; the financial situation, Chicago education fund. *Chicago principals' club reporter*, 17: 7-9, November 1927.

— OBRIEN, ROBERT E. The cost of parochial education in Chicago. *Journal of educational sociology*, 2: 349-56, February 1929.

A statistical presentation of parochial and public-school costs showing a diversity of parochial and public-school costs, ranging from \$26.65 to \$182.95 in Chicago with similar figures on functions. Concludes that it is necessary to correct some parochial school costs for expenses borne by the church.

— What Chicago spends for education. *Chicago high school teachers' club news*, 13: 4-5, November 1928.

Cleveland, Ohio. BAIN, C. L. Data relative to the current expenditures of the Cleveland public schools: 1922-23. *Cleveland, Ohio. Board of education. Educational department. Division of reference and research. Bulletin no. 65*, February 23, 1924.

— Measuring the current expenditures of the Cleveland pub-

lic schools (1910-1922). *Cleveland, Ohio, Cleveland public schools*, 1923. 28 p.

Cost of education in 26 cities. *American school board journal*, 78: 128, August 1926.

Statistical presentation of elementary, junior high school, and senior high school per pupil costs in 1925.

Des Moines, Iowa. How much do our schools cost the taxpayer? *Board of directors, Des Moines public schools*, 1932. p. 43.

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El Paso, Tex. The cost of education. *El Paso schools standard*, 10: 135-36, January 1931.

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The public-school budget of Fordson, Mich., is statistically and graphically analyzed in terms of general control, instruction, operation, and maintenance of plant, auxiliary agencies, coordinate activities and fixed charges. Increases of enrollment and costs are examined for period of 1923-1928.

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Los Angeles, Calif. The cost of education relatively considered. *Los Angeles school journal*, 14: 42, 44, 46, 48, 50, 52, 54, September 29, 1930.

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Muncie, Ind. CALVERT, T. B. A brief review of the education program in the Muncie city schools, with the financial plan for supporting it. *In Public schools, Muncie, Ind. Muncie, Ind., Public school board*, 1930. (Bulletin, 1930, no. 46)

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Ohio. The cost of educating a child in one Ohio city. *Journal of the Ohio State teachers association*, 2: 3, February 1924.

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Rochester, N. Y. The cost of public education. *Rochester, N. Y., Board of education*, 1923.

Syracuse, N. Y. Public schools. A study of the financial statistics of the city of Syracuse compared with statistics of other cities. *Syracuse, N. Y., School board*, 1931. 39 p.

COSTS, STATISTICS

(These appear in the statistics of city school systems bulletins of the United States Office of Education. See City School Statistics. Many valuable statistics appear from time to time in the research bulletins of the National Education Association, traceable through the index at the end of each volume. The Financial Statistics of Cities series of the Bureau of the Census gives many finance statistics of cities by size groups, and individual cities, particularly valuable for comparison with the cost of other governmental services. The latest in print is the number for 1928.)

COMSTOCK, LULA MAE. Per capita costs in city schools, 1929-30. *Washington, U. S. Government printing office*, 1931. 13 p. (U. S. Office of education. Pamphlet, no. 19, April 1931.)

Ranges for city groups and figures for individual cities on cost and percentage of current expense for current expense and its six standard subdivisions. Corresponding data for previous years appear in these publications of the United States Office of education:

- 1921-22. 4 pages. (Statistical circular, no. 1.)
- 1923-24. 7 pages. (Statistical circular, no. 4.)
- 1925-26. 9 pages. (Statistical circular, no. 7.)
- 1927-28. 11 pages. (Statistical circular, no. 12.)
- 1929-30. 13 pages. (Pamphlet no. 19, April 1931.)

FINANCE, FISCAL CONTROL

See Fiscal Control, City.

FINANCE, FOREIGN

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FARMER, SAMUEL. The financing of urban schools. *Canadian school board journal*, 5: 7-8, June 1926.

England. Appropriations for the London schools. *School and society*, 25: 278, March 5, 1927.

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STOCKINGER, W. A. Financing a small school system. *American school board journal*, 72: 40, 144, March 1926.

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- Boston, Mass. Finances of Boston school systems. *School and society*, 31: 498, April 12, 1930.
- Carbondale, Ill. How one community met its problem for increased financial support; the Carbondale school situation and its solution of the problem. *American school board journal*, 78: 96, June 1929.
- Cary, N. C. HAWKES, F. P. School finances in the town of Cary, N. C. *American education*, 30: 107-12, December 1926.
- Chicago, Ill. A study of Chicago school finances. *American school board journal*, 73: 70, 148, 151, October 1926.
- BEEBY, D. J. The finances of the Chicago board of education. *Chicago principals' club reporter*, 18: 3-7, March 1929.
- DODGE, CHESTER C. Chicago's financial muddle. *Chicago principals' club reporter*, 19: 3-5, April 1930.
- HENBY, NELSON B. Financial support and administration of the Chicago public schools. *Elementary school journal*, 32: 495-503, March 1932.
- Description of the factors underlying this problem and an analysis of changes needed in the finance system and the administrative practices.
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- School finance. *Chicago principals' club reporter*, 19: 3-5, January 1930.
- ROGERS, DON C. Financial condition of the Chicago public schools. *Chicago, Ill., Chicago principals' club*, 1926. Unp. (Service bulletin, no. 6, June 1926)
- The financial needs of the Chicago schools. *School facts*, 1: 1-4, May 12, 1930.
- What Chicago's "student city" spends. *Chicago commerce*, 22: 13, 28-29, August 28, 1926.
- Cleveland, Ohio. HAZEL, H. R. What of the financial future in Cleveland? *Ohio schools*, 9: 96-97, March, 1931.
- Detroit, Mich. Detroit's school finance problem. *American school board journal*, 77: 43, 153, July 1928.
- Minneapolis, Minn., REED, CARROLL R. Financing the schools in Minneapolis, 1932. *Minneapolis, Board of education*, 1932. 60 p.
- Shows in detail educational expenditure in Minneapolis since 1900. Analyzes the cost by functions. Graphs. tables.
- Ohio. TRACY, J. T. and HEETER, D. O. Comparative statistics of city schools of Ohio, 1926. *Columbus, Ohio, J. F. Heer printing co.*, 1928. 86 p.
- Tabulates statistics of dollar expenditures, city school levys, building and land sales, bonded debts, fines and penalties, instruction costs, interest on debts and depository funds, library, lunch, playground and transportation costs, real and personal property tax rates and revenues, rentals, tuitions, and of State aid for 93 Ohio cities during 1926.
- WALLS, R. A. School finances in a small Ohio city. *American school board journal*, 75: 62, 142, 144, November 1927.

FINANCE REVENUES

See City School Finances

FINANCE, STATISTICS

[Finance statistics are to be sought in the bulletins of the United States Office of Education. The latest in print, Bulletin, 1929, no. 34, covers 1927-28 for city school systems. Bulletins for earlier years can be located through the list of educational publications for the United States Office of Education at Washington or by looking under the head of City School Systems in Carter Alexander's Educational Research, third edition, 1931. The statistics include such items as value of school property, receipts by sources, expenditures by classes for day schools, part-time and continuation schools, night schools and summer schools, expenditures for current expense and its functions with their subitems for kindergartens, elementary schools, junior high schools and high schools, and expenditures for debt service and capital outlay. Statistics for individual cities tabulated by classes, with some State summaries. The research bulletins of the National education association contain many valuable city school finance statistics, traceable through the index at the end of each volume. The Financial Statistics of Cities series of the United States Bureau of the Census (latest in print, 1928) gives statistics on schools as compared with other governmental services]

PHILLIPS, F. M. Comparison of city and school finances in 95 cities. *Washington, U. S. Government printing office*, 1927. 7 p. (U. S. Office of education. Statistical circular, no. 6, January 1927)

FINANCE, SURVEYS

See also Building Finance, Cities, Individual; Surveys, General

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- S. Dak., with proposed site and building program 1925-26, p. 57-64.
- Albert Lea, Minn. ENGELHARDT, FRED. Survey report of Albert Lea public schools. *Minneapolis, Minn., University of Minnesota*, 1927. 61 p. (University of Minnesota. Educational monograph, no. 14, June 25, 1927).
- Alhambra, Calif. HULL, OSMAN R. and FORD, WILLARD S. Survey of the Alhambra public schools, housing, finance, business management. *Los Angeles, Calif., University of Southern California*, 1928. 107 p. (Studies, second series, no. 50.)
- Aurora, Minn. ENGELHARDT, FRED, and others. Survey report of Aurora public schools. *Aurora, Minn., University of Minnesota*, 1927. 111 p. College of education, educational monograph, no. 13. Bulletin, vol. 30, no. 36.
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- Berkeley, Calif. SEARS, J. B. Berkeley school business management. *Berkeley Calif., Board of education*, 1926. 40 p.
- Closter, N. J. STRAYER, GEORGE D. Report of the survey of schools of Closter, N. J. *Institute of educational research, Division of field studies, Teachers college, Columbia university, New York city*, 1928. 138 p.
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- Crystal Lake, Minn. ENGELHARDT, F. Survey report of Crystal Lake, Minn., public schools. *Minneapolis, Minn., University of Minnesota*, 1926. 100 p. (University of Minnesota. College of education. Monograph, no. 10, 1926.)
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- Fort Worth, Tex. STRAYER, G. D., ENGELHARDT, N. L., and others. Report of the survey of the schools of Fort Worth, Tex. *New York, Division of field studies, Institute of educational research, Teachers college, Columbia university*, 1931. 438 p.
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- Galveston, Tex. SHELBY, T. H. and PITTINGER, B. F. Survey of Galveston public schools. *University of Texas, Austin, Tex.*, 1926.
- Glocester, R. I. Survey of the public schools of Glocester, R. I. Requested by the School committee of the town, authorized by the State board of education. Report of the survey. *Public education service, State of Rhode Island*, 1930. 16 p. (Rhode Island education circulars.)
- Greenwich, Conn. ALEXANDER CARTER. Report of the financial survey of the public schools of Greenwich, Conn. *Board of Estimate, Greenwich, Conn.*, 1930. 37 p.
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This is volume 3 of the report of the work and progress of the schools of Houston for the period mentioned. It is an attempt to show graphically what activities are being carried on, why they are being done, and how well they are done. The subjects considered deal with achievement of the schools at all levels, the failures and causes of failures, special classes, creative work, vocational education, etc.

- Humble, Tex. Report of survey of Humble public schools. Vol. XVI, no. 3. *Sam Houston teachers college*, 1926. 70 p.
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- This survey of 12 Cape Cod towns contains facts about school systems needs; a technique for measuring ability of children toward meeting individual needs; a table showing distribution of salaries paid teachers in 1924-25; and a chapter on school finances.
- Nashville, Tenn. School finance. In Public schools of Nashville, Tenn., A Survey report. *Nashville, Tenn., Division of surveys and field studies, George Peabody college for teachers*, 1931. p. 352-73.
- The problem of school finances in a city which is far more generous with protection and charities than with schools, and has a huge amount of tax-exempt property.
- Newark, N. J. O'SHEA, M. V., and others. All year schools of Newark. N. J. Board of education, 1926. 96 p.
- Newburgh, N. Y. STRAYER, GEORGE D. and ENGELHARDT, N. L. Report of the survey of the schools of Newburgh, N. Y. *Institute of educational research, Division of field studies, Teachers college, Columbia university, New York city*. 1929. 312 p.
- New Castle, Pa. Report on the administration of the schools of New Castle, Pa. *Washington, U. S. Government printing office*, 1927. 11 p. (U. S. Office of education. City school leaflet, no. 24, March 1927.)
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- Pasadena, Calif. Survey of Pasadena city schools. *Los Angeles, Calif., California taxpayers' association*, 1931. 331 p. (Association report, no. 119.)
- Includes sources of revenue, assessed valuation of district, school tax rates, growth in enrollment, growth in expenditures, unit costs by functions, costs per pupil in average daily attendance, kindergarten, elementary, high-school, and junior college costs, valuation of property, and bonded indebtedness in the Pasadena school district.
- Perth Amboy, N. J. STRAYER, GEORGE D. and ENGELHARDT, N. L. Report of the survey of the schools of Perth Amboy, N. J. *Institute of educational research, Division of field studies, teachers college, Columbia university, New York city. Bureau of publications, teachers college, Columbia university, New York city*. 1929. 305 p.
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- Racine, Wis. BARR, A. S. The Racine school survey. *Racine, Wis., Board of education*, 1926. p. 10-40.
- Contains a section on budgeting and another on Financial Accounting and Business Procedure. The treatment of salaries includes a comparison of salaries paid administrative officers and janitors in cities of 30,000 to 100,000, with those paid in Racine. Median salary at Racine higher than median for United States as a whole.

Report of the Buffalo school survey. Report of a survey of the public schools of Buffalo, N. Y., made upon invitation of the Board of education of the city of Buffalo by the Buffalo municipal research bureau. Part I and Part II . . . Buffalo, N. Y., Buffalo municipal research bureau, inc., 1931. 2 v. tables, diagrs. maps.

Part I. Foreword by the United States Office of Education and personnel of the office who served on the staff for the Buffalo school survey; Administration and organization, elementary schools, secondary education, provisions for exceptional children, the industrial education program, commercial education pre-service and in-service education of teachers, adult education, finance and school costs. Part II. The Board of Education, general office administration, financial administration, purchase, distribution, and control of supplies, school sites, school architecture, school buildings, school plant operation and maintenance, Bureau of research and statistics, and summary of findings and recommendations.

Schenectady, N. Y. School costs. In A study of the Schenectady school system. Albany, N. Y., State department of education, 1928. p. 73-110.

Covers usual general unit costs for Schenectady and eight other comparable cities in New York State, latest data being for 1925.

Springfield, Ohio. HOLY, T. C. Survey of the schools of Springfield, Ohio. Columbus, Ohio State university, 1931. 84 p. (Bureau of educational research. Monographs no. 10.)

A compact but comprehensive survey of a school system including the following major divisions: Growth and character of the city, the school organization and school population, status of the present school plant, utilization of the present plant, the financial program, and school-building needs.

South Kingston, R. I. Survey of public schools of South Kingston, R. I. Providence, R. I., State board of education, 1927. 15 p. (Rhode Island education circulars.)

Stamford, Conn. STRAYER, GEORGE D., and ENGELHARDT, N. L. Report of the survey of the public-school system of Stamford, Conn., 1922-23. Institute of educational research, Division of field studies, teachers college, Columbia university, New York city, 1923. 237 p.

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Tampa, Fla. STRAYER, G. D. Report of a survey of the schools of Tampa, Fla. Teachers college, Columbia university, 1926. 308 p. (Teachers college, Columbia university. School survey series.)

Utica, N. Y. STRAYER, G. D. and ENGELHARDT, N. L. Financing the building program in Utica, N. Y. A school-building program for the City of Utica, N. Y. Utica, N. Y., Board of education, 1930. p. 41-50.

Vallejo, Calif. HART, F. W. and PETERSON, L. H. A survey of educational program, organization, administration, school finance, and school housing of Vallejo, Calif. Berkeley, Calif. University of California. Department of education, 1926. p. 82-90, 98-110.

An exhaustive analysis of the cost of education in Vallejo, Calif., with comparable data from 19 other cities. Tables and charts, show school plant investments, relationship of size to per capita costs, placement with reference to population, distribution, ability, and effort of the school district to finance its building needs.

Watertown, Mass. ALEXANDER, CARTER. Financing education in Watertown, Mass. In Teachers college, Columbia university. Institute of educational research. Report of the survey of the schools of Watertown, Mass., made by the Division of field studies, 1931. p. 71-91. New York city, Teachers college, Columbia university, 1931.

The problem of school finance in a Boston suburb that has favored buildings over current expense and yet has a very inadequate school plant.

Winnetka, Ill. WASHBURNE, CHARLETON; VOGEL, MABEL; and GRAY, WILLIAM, S. A survey of the Winnetka public schools. 1926, p. 122-31.

Accounts for the costs of general control, instruction, operation, maintenance, fixed charges, health activities, and other activities in the Winnetka public schools in 1925-26.

CLASS SIZE

See also Instruction Costs; Teaching Load

ALMACK, JOHN C. Class size as a factor in school costs. In University of Pennsylvania. Schoolmen's week proceedings. Fifteenth annual, 1928. p. 211-15.

Reviews the test method used by Rice, Elliott, and Harlan to measure the relationship of class size to efficiency, the percentage promoted method used by Cornman, Boyer, Bachman, and Elliott, and the experimental method used by Breed, McCarthy, Stevenson, and Almack. Concludes that to insure economic use of school funds class sizes should not be reduced indiscriminately.

BUCKINGHAM, B. R. Class size once more. *Educational research bulletin*, 4:186, April 29, 1925.

California. Class size economies. California schools. *Sacramento, Calif., State department of education*, 3:65-66, March 1932.

Class size in the elementary school. *Elementary school journal*, 28:487-88, March 1926.

COMBS, M. L. Efficiency in relation to size of high school. *Richmond, Va., State department of education*, 1927. 185 p. (Research and surveys department. Bulletin, vol. 10, no. 3, 1927.)

A statistical tabulation of high-school instructional costs in seven types of white and Negro schools in Virginia in 1923-25 is presented in chapters 4 and 5 of this study.

Cost reduction problem in the Cleveland schools. *School and society*, 19:587-89, May 17, 1924.

DAVIS, C. O. The size of classes and the teaching load in the high schools accredited by the North central association. *School review*, 31:412-29, June 1923.

Efficiency of teaching and size of class. *School review*, 34:642-44, November 1926.

HARLAN, C. L. Size of class and types of instruction. *Journal of educational research*, 14:120-25, September 1926.

A statement to the effect that class size seems relatively unimportant in the amount children profit from classroom activities. Suggests the necessity for special investigation as to adapting different types of instruction and the nature and content of the subject to classes of different sizes.

HOOD, J. T. jr. Instruction costs in typical small high schools. *Nation's schools*, 4:38, November 1929.

Using salary data of 1928 to 1931 as a basis, this series of two articles analyzes the instruction costs in a small high school in terms of teacher loads, costs of various departments and groups, costs of various subjects, and costs of various programs of studies. Statistical tables supplement the discussion.

HUDELSON, EARL. Class size at the college level. *Minneapolis, Minn., University of Minnesota press*, 1929. 209 p.

An extensive scientific study of the cost and relative efficiency of large and small classes at the University of Minnesota. "All that can be said is that in the courses investigated the effect of class size upon student achievement is, in the opinion of the subcommittee, too slight to warrant the cost of small classes." Bibliography.

Class size in universities. *Educational review*, 72:231-34, November 1926.

Examines the advantages and disadvantages of large and small classes in the university and concludes that in so far as results can be accurately measured, students are being trained just as efficiently in large classes as small ones. Concludes that the enlargement of classes to curtail university expenses is probably legitimate.

KEYWORTH, M. R. Size of classes and teacher load—Abstract. In National education association, department of superintendence official report, 1932. Washington, D. C., February 1932. p. 248-50.

SPRINGFIELD PUBLIC SCHOOLS. The number of pupils per teacher. In Study of teachers salaries in Springfield. *Springfield, Ill., Public schools*, 1929. 23 p. Bulletin no. 3, April 9, 1929.

A study of how one school system found it could teach the pupils with fewer teachers without a corresponding decrease in the efficiency of the schools. Bibliography of 15 references with unusually good brief abstracts.

STEVENSON, P. R. Class size. *Educational research bulletin, Ohio State university*, 3:140-43, April 2, 1924.

Class size in the elementary school. *Columbus, Ohio state university*, November 30, 1925. (Ohio state university studies, vol. 2, no. 10, chapter 1.) (Bureau of educational research monographs no. 3.)

Briefly estimates the savings made by increasing class size and the cost of decreasing class size. Defends the thesis that if better work is done in smaller classes cost should become a secondary consideration.

More evidence concerning large and small classes. *Columbus, Ohio state university*, 1925. p. 231-33. (Educational research bulletin, vol. 4, no. 11.)

A discussion of instructional costs in relation to class size. Since these costs approximate two-thirds to three-fourths of the total school costs, the question is raised concerning the amount of superiority a small class should show over a large one to justify its greater cost. The records of two algebra classes, one of 15 pupils, and one of 37 pupils of the same intelligence, taught by the same teacher, indicate that the training received in the large class was practically as effective as that in the smaller.

WETZEL, WILLIAM A. Larger group instruction. *School review*, 39:288, April 1931.

A treatment of the effects of new teaching devices and techniques provided by the advance of educational, social,

and physical science. Explains that these improvements may make it possible to increase the size of classes without harming class. Administrators should be alert to both the educational and financial economy inherent in new educational equipment and devices.

COMMERCIAL EDUCATION

COSTS

Iowa. Status of commercial education in secondary public schools of Iowa. *Iowa City, University of Iowa*, 1926. p. 9. (University of Iowa extension bulletin, no. 144. College of education series, no. 19.)

Describes, by means of statistical data, the relationship between certain factors, such as training, age, business experience, and teaching experience, and salaries paid to commercial teachers in secondary public schools of Iowa, 1925-26. Data are divided into groups on the basis of sex, and each group is subdivided into five further groups according to high-school enrollment.

Iowa City. LA DOW, ROBERT. A survey of commercial education in the junior college. *Iowa City, Iowa City press*, 1929. 240 p. (Research studies in commercial education, no. 4.)

Median salary paid junior college commerce instructors is \$2,350, as against \$2,400 in colleges.

Marion, Ind. COLE, M. S. A descriptive research investigation and study of the commercial educational needs of Marion, Ind., based on the tabulated results of a questionnaire. *Ball state commerce journal*, 2: 19, 25, May 1931.

The last of a series of reports dealing with the commercial educational needs of Marion, Ind.

Michigan. Report on teachers of commercial subjects in the state of Michigan. *Ann Arbor, Mich., University of Michigan*, 1930? p. 5-6. (Michigan vocational news. Bulletin, vol. 6, no. 3.)

Brief tabular study of salaries received by teachers of commercial subjects in day and evening classes in the vicinity of Detroit during 1929.

New Jersey. LOMAX, PAUL S. A study of the comparative status of commercial and other teachers in New Jersey. *Trenton, N. J., State department of education*, 1927. (Education bulletin.)

Wisconsin state-wide commercial education survey, report of. *White-water, Wis., Whitewater State teachers college*. Bulletin, 1931, no. 158. 75 p.

GENERAL

See also Vocational Education. Federal Aid

SHIELDS, H. G. Some economic considerations in secondary school business education. *School and society*, 31: 607-9, May 3, 1930.

Historical comparison in enrollments in high schools, from 1893-94, showing increase in number of public high-schools students. Tables of comparisons of weekly salaries paid clerical workers and manual laborers bring conclusion that no adequate economic proof is available to indicate that clerical education increases earning power.

WIEST, EDWARD. There is a demand for the college-trained secretary. *Journal of business education*, 6: 29-30, April 1931.

CONSOLIDATION

See also Transportation

AID

See State Aid, Consolidation

COSTS AND ECONOMIES

ABEL, J. F. Consolidation of schools and transportation of pupils. *Washington, U. S. Government printing office*, 1923. p. 1-135. (U. S. Office of education. Bulletin, 1923, no. 41.)

Arkansas. DAWSON, HOWARD A. and HIRST, CLAUDE M. Programs of school consolidation. September 1928. *Division of statistics and information, State department of education, Little Rock, Ark.*

Sets forth a plan of school consolidation for each county of Arkansas. Includes an estimate of the cost and amount of State aid needed by each county.

California. Consolidation economies. In California schools. *Sacramento, Calif., State department of education*, March 1932. Vol. 3, no. 3, p. 62-64.

Kern county report. An analysis of the expenditures of Kern county, Calif., for the fiscal year 1925-26. May 1927. *Los Angeles, Calif., California taxpayers' association*. 78 p.

A detailed study of the county's business, including the administration and cost of the various types of schools. Recommendations include a continuation of the policy of unionization of small schools to reduce per capita costs, more careful administration of pupil transportation, elimination of small classes in large schools, etc. (Other studies made by the California taxpayers' association, similar to the Kern County study, are those of Santa Rosa, Santa Paula, San Diego, and Santa Barbara.)

California. Report on Santa Barbara county, Calif. *California taxpayers' association, Los Angeles*. Report no. 19, February 1929. 154 p. tables, diagrams. (See also similar studies of other California counties.)

One section, covering 43 pages, concerns administrative educational problems. Sets forth a practical plan in detail for consolidating small elementary schools whereby a saving of \$25,850 in teachers' salaries would be effected. A saving of \$12,389.17 would result if school-owned buses were operated at the same average cost as that of contract buses.

Colorado. SARGENT, C. G. Consolidated schools successfully replace one-room type. *Nation's schools*, 1: 23-28, March 1928. illus.

Shows how the pioneer one-room schools are being replaced by modern rural schools. Presents data concerning 4 typical consolidated schools of Colorado. Compares cost with those of 4 city school systems.

Connecticut. LARSON, EMIL L. One-room and consolidated schools of Connecticut. A comparative study of teachers, costs, and holding power. *New York city, Teachers college, Columbia university*, 1925. Contributions to education, no. 182.

A study based on data from 98 Connecticut towns to determine the comparative costs, teacher qualification, and holding power in the two types of schools. Costs no greater in consolidated schools. Holding power better in consolidated schools, and teachers in these schools are better trained.

Florida. FULK, JOSEPH R. A study of the Alachua public schools, Alachua, Fla. June 1925. *Gainesville, Fla. University of Florida, Teachers college*. (University record, vol. 20, no. 1. Extra no. 2.)

A detailed study of the consolidated schools of the community of Alachua, Fla. Four communities had united four years previous to the time of the study. Six buses are used to transport pupils; 4 are driven by men at a salary of \$25 each per month and 2 by students at \$10 each per month.

GEIGER, M. P. and TURNER, R. L. Consolidation, finance, and illustrated exhibit of schools of Marion county. - Tallahassee, Fla. *State department of public instruction*. [1926.] 84 p. (Florida school bulletin, vol. 2, no. 3, January 1926.)

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter XII. How school costs can be reduced by the elimination of small school units. *Lincoln, Nebr., University of Nebraska, extension division*. 1932. p. 151-59, 200. (Univer-

sity of Nebraska publications, monograph no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

Illinois. Are consolidated schools really expensive? *Springfield, Ill., Illinois State teachers association, [Research department]*. 1928. mimeographed.

Compares per pupil costs in the 36 consolidated schools of Illinois which have significant transportation expense with the per pupil costs in 1-room schools similarly located. Consolidated schools cost practically the same, but provided transportation and better education.

Some problems of the larger school units in Illinois. Department of research and statistics. *Springfield, Ill., Illinois State teachers association*. July 10, 1926.

Sets forth by tables and graphs inequalities in school tax rates, in educational offerings, and in attendance. Tax rates are 11 times higher in some districts than in others due to unequal distribution of wealth. In 10 counties studied the average daily attendance in 1-room schools was 17.3 and 540 schools had fewer than 15 pupils each in average daily attendance.

INDIANA RURAL EDUCATION SURVEY COMMITTEE. Report of the Indiana rural education survey committee. *Indianapolis, State department of education*, 1926. 130 p.

The report contains many data relative to consolidation and transportation. Average cost for the year 1923-24 per elementary pupil in townships having only 1-room schools was \$52.62 and in other townships it was \$61.56; less transportation cost in each case. These costs are \$46.66 and \$43.74, respectively.

Iowa. Consolidated school costs in Iowa. *American school board journal*, 70: 65, April 1925.

HOLY, T. C. Relation of size to cost of operation in certain schools of Iowa. *Journal of rural education*, 3: 317-22, March 1924.

A study of 92 second-class cities ranging in size from 2,000 to 15,000. Data include many facts relative to consolidation and the conclusions are applied to the planning of consolidations.

KELLOGG, GEORGE H. Tabulation of costs of schools of Story county, Iowa, and Second report on transportation. 1924. 2 p. (Mimeographed.)

A concise presentation of statistics of each school of the county (5 city and town independent, 13 consolidated, and 11 one-room). Median annual per pupil costs in the different types of schools.

STONE, H. E. The costs of establishing and operating consolidated schools in Iowa. Master's

thesis, 1928. *Ames, Iowa, Iowa state college*. 16 p.

A study of all consolidated schools in Iowa to determine important cost factors involved in their establishment and maintenance to provide a basis of recommendations for financing them. The cost of transporting pupils to consolidated schools in Iowa (approximately \$36 per pupil per year) is a burden of expense peculiar to these schools and therefore should be met by State aid.

— WILLIAMS, R. C. Taxes in consolidated districts. *Des Moines, Iowa, State department of public instruction*, November 1931. 6 p. (Research bulletin no. 7. mimeographed.)

Analyzes in detail the taxes paid and the cost of education in Iowa's 287 consolidated school districts.

Kansas. SMART, THOMAS J. A proposed larger school unit for an area in northeastern Kansas. *Lawrence, University extension division, University of Kansas*, 1927. (University of Kansas studies in education, vol. 1, no. 8, July 1, 1927.)

A detailed study of the factors involved in the administration of 5 rural high-school districts, including valuations, school tax levies, present school costs (in relation to enrollment and size of classes), and buildings with view of improving the administrative unit for the 5 schools.

— How better schools for less money may be made available for a Kansas community. Bulletin of education, University of Kansas, vol. III, no. 3, February, 1931. *Bureau of school service and research, University of Kansas, Lawrence*.

A statistical study to show economy of combining schools. Five districts involved. Data in tabular and graphic form are presented.

Louisiana. FAULK, J. W. Cost of building and equipment in consolidated schools. In Consolidation of schools and transportation in Lafayette parish, La. *Washington, U. S. Government printing office*, 1923. p. 5. (U. S. Office of education. Leaflet, 1923, no. 19.)

Missouri. Facts concerning public education in Missouri. Report of the Missouri school survey . . . Issued by Charles A. Lee. *Jefferson city, The Hugh Stephens press*, 1924. 139 p. tables, graphs.

Contains a chapter describing the steps taken to bring about larger administrative units for rural schools and many data showing present costs and educational opportunity for education in rural districts.

New Mexico. MONTOYA, A. The consolidated schools of Bernalillo county, N. Mex. *Washington, D. C.,*

U. S. Government printing office, 1923. 8 p. (U. S. Bureau of education. Rural school leaflet no. 22.)

Describes a 6-year program of consolidation resulting in the establishment of 6 schools and the elimination of several small buildings. Transportation costs 8 cents per day per pupil. Expenses are greater but schools are better.

TRENHAM, N. B. Economies in school consolidation. *Tax digest*, 7:233, July 1929.

U. S. OFFICE OF EDUCATION. Financial data, salaries and transportation. In Rural school consolidation. *Washington, U. S. Government printing office*, 1930. Table 11. p. 28-38. (U. S. Office of education. Pamphlet, no. 6.)

A table in this pamphlet contains a number of data on finance for each of the 105 consolidated schools involved in the study. Includes assessed valuation of districts, value of school property, transportation costs, teachers' salaries, etc.

GENERAL

Arkansas. Larger school units for Arkansas. Consolidated schools and county units. *Division of research and surveys, Arkansas State department of education, Little Rock, Ark.*, September 1929. 22 p. multi-graphed. tables.

A complete description of existing school districts in Arkansas including provisions for their legal controls. Shows how larger units would be beneficial.

California. MORGAN, WALTER E. Report on the educational, administrative, financial and legal aspects of the consolidation of the Glendale and Crescenta elementary school districts, with the Glendale union high-school district. Mimeo. 20 p. *Sacramento, Calif., State department of education*, 1931.

Good example of effective study and presentation of all important financial matters involved.

— PURDUM, ERNEST R. Legal aspects of the county unit bill. *The tax digest*, April 1929. p. 123. *California Taxpayers' Association, Los Angeles*.

Explains the legal aspects of consolidation.

— SEARS, JESSE B. Marysville union high school. A report of an investigation of the physical needs of the school and of a plan for financing the proposed program of development. *Board of education, Marysville union high school, Marysville, Calif.*, 1925. 51 p. tables, graphs.

Among the recommendations it is suggested that a junior high school plan for

the territory included in the high-school district be kept in mind as a probable need three to five years hence.

CAMPRELL, MACY. The financial support of consolidated schools. *Journal of education*, 105: 256-58, March 1927.

CARDOZO, FRANCIS L. The consolidation of rural schools. *Education*, 44: 521-33, May 1924.

Discusses the advantages of consolidation, involving also the transportation of children to school at public expense.

Colorado. HUNTER, W. F. Finances in consolidated schools of Weld county, Colo. *Educational administration and supervision*, 12: 491-96, October 1926.

SARGENT, C. G. The consolidated schools of Weld county, Colo. *Washington, U. S. Government printing office*, 1923. 11 p. (U. S. Bureau of education, Rural school leaflet no. 13.)

A descriptive treatment of the 25 consolidated schools of the county. One-third county area, one-third its assessed valuation, two-fifths of the teachers, and two-fifths of the enrollment are in the consolidated districts.

WHITE, ROSCOE H. Consolidated school financing in Colorado. *Colorado school journal*, 42: 23-24, March 1927.

Connecticut. MILLS, L. S. School consolidation a gradual and spontaneous development. *School life*, 12: 53-56, November 1926.

An interesting review of the centralization of the 10 districts of the town of Farmington, Conn. Contains many data and is an illuminating article on the subject for the student interested in the history of the movement.

Florida. GEIGER, M. P. and TURNER, R. L. Consolidation, finance and illustrated exhibit of schools of Marion county. *Tallahassee, Fla., State department of public instruction*. [Florida school bulletin, vol. II, no. 3, January 1926.] 84 p.

A comprehensive study including many data on consolidation of schools. This movement "has been steadily growing in favor with the people of the county. Schools have been united every year since the movement began, and very little consolidation has been undone. . . ."

Illinois. GRIMM, L. R. Factors and problems in the centralization of elementary schools in Illinois. *Department of research and statistics, Illinois state teachers association*, exhibit no. 131, December 1927. (Also published in the *Illinois Teacher*, vol. 16, January and March 1928.)

Discusses the dual system of organization for elementary and secondary

schools, a dwindling rural population, the sentimental preservation of rural schools, transportation facilities, costs, methods of finance, State aid, incentives for consolidation, mandatory regulations concerning transportation, regulation for closing small schools, the basic school unit as a factor in centralization, and miscellaneous legal considerations as factors in the centralization of elementary schools in Illinois.

Indiana. SCHOOLS SURVEY COMMISSION. Report . . . January 1931. Commission authorized by Senate joint resolution no. 7, 76th session general assembly. In Joint and consolidated schools survey commission. *Indianapolis, Ind., State legislature*, 1931. 32 p.

Kansas. MORT, PAUL R. Report of the state school code commission of Kansas. A plan for providing equality of educational opportunity in Kansas. *Topeka, Kans., State printing plant*, 1928. Supplement to volume II, October 1928. 100 p.

This study proposes a minimum educational program and outlines the procedure for setting up an equitable financing plan. Tables show the operation of the proposed financing plan in all Kansas school districts. One-teacher district problem.

Louisiana. FOOTE, JOHN M. An administrative and financial study of the Washington parish school system. *Baton Rouge, La., State department of education*, 1927. 100 p. (Bulletin no. 112.)

A study of the educational facilities in Washington parish, La. Sets forth through tables, description, and maps the situation in regard to organization, administration, finance, and needs of the schools. Recommends closer supervision of attendance, transportation, and finance by the parish board of education and the parish superintendent of schools.

MARBERRY, JAMES O. The administration of public education in centralized and coordinated schools. Ph. D. thesis, 1926. *University of Wisconsin, School of education, Madison, Wis.*

Maryland. STREETER, CARROLL P. Quality and equality for the rural schools. In *The farmer's wife*, vol. XXXI, no. 9. *St. Paul, Minn., Webb publishing co.*

An interesting description, using many data of the Anne Arundel county, Md., schools. The schools of this county are consolidated.

Michigan. Part I. Education in a rural school district, 1928-29. Part II. Progress in rural education in Michigan to 1929. *Lansing, Mich. Webster H. Pearce, superintendent*

of public instruction, 1929. 74 p. tables. (Bulletin no. 56.)

Contains one section on consolidation. Shows number of consolidations, number of one-room schools replaced, and other relevant data.

NOTES, HULDAH. Twelve objections to consolidation. *Kansas teacher*, 23: 13-15, June-July 1928.

Most of the 12 objections to consolidation frequently heard can be grouped under two heads: First, transportation problems, and second, finance. The 12 objections are listed and answered in the article.

MUELLER A. D. Progressive trends in rural education. *New York, The century co.*, 1926. 363 p. charts.

Several chapters are devoted to problems of the larger rural school unit and consolidation. Data are used for illustrating what is being done throughout the country.

Pennsylvania. BLAIR P. D. Consolidation of schools and transportation of school children. *Pennsylvania school journal*, 75: 539-41, April 1927.

A description of the consolidation movement in Crawford county, Pa., by townships. One hundred and forty-four 1-room schools in the county have been closed. Pine township in this county was among the first in the State to consolidate its schools. Eleven hundred children are transported from 106 of the closed schools at a cost of \$46,305.53, \$23,268.24 of which is refunded by the State.

— **SHAW, ROBERT C.** Fifty reasons for consolidation of rural schools. There are others. *Pennsylvania school journal*, 75: 542, April 1927.

The 50 reasons apply particularly to Pennsylvania conditions as stated by the deputy State superintendent.

STATISTICS

ABEL, JAMES F. A study of 260 school consolidations. *Washington, U. S. Government printing office*, 1924. 39 p. (U. S. Bureau of education. Bulletin, 1924, no. 32.)

A questionnaire study of consolidated schools selected as representative by State departments of education in each of the 48 States. Median school consolidation as judged from 260 schools serves an area of 36 square miles, employs 11 teachers, enrolls 204 children in elementary grades, 76 in high school, pays a salary of \$1,425 per year to high-school teachers and \$1,120 per year to elementary teachers.

— Recent data on consolidation of schools and transportation of pupils. *Washington, U. S. Government printing office*, 1925. 24 p. (U. S. Office of education. Bulletin, 1925, no. 22)

COVERT, TIMON. Rural school consolidation. *Washington, U. S. Government printing office*, 1930. (U. S. Office of education, pamphlet no. 6.)

Presents tabular information to show a decade of progress in the consolidation movement. Contains detailed information from 105 consolidated schools throughout the United States.

Florida. Consolidation of schools. Tallahassee, State department of public instruction, 1924. 27 p. (Florida school bulletin, vol. 1, no. 5, September 1924.)

Presents in tabular form the consolidation situation in Florida by counties. Giving many data concerning each school. Transportation information included.

Indiana. ROUDEBUSH, ROY R. School consolidation in Indiana. *American school board journal*, 75: 47-48, September 1927.

A statistical treatment of the rural school situation in Indiana. Numbers of different types (sizes) of schools are presented in tabular form. Other data include enrollment, number of teachers, and costs of transportation.

Iowa. CAMPBELL, MACY and others. An intensive study of transportation in 37 typical Iowa consolidated schools. *Journal of rural education*, 3: 246-53, February 1924.

Data are presented in tabular form and show such items as areas, numbers of pupils, length of routes, costs, and types of roads for each school. Horse and motor transportation compared. Latter \$2.41 more per year per pupil.

— Consolidated schools of Iowa. *Des Moines, Iowa State department of public instruction*, 1926.

A comprehensive presentation of relevant data. Includes many tables showing growth and present status of consolidation.

Kansas. SMITH, M. L. and WILLOUGHBY, WILL W. A survey report concerning the 172 Kansas consolidated schools. *Kansas State teachers college, Emporia, Department of consolidation*, 1926. (Mimeographed.)

A statistical study of all consolidated schools in Kansas. These schools have averages as follows: Area 38 square miles, valuation \$1,263,073, tax rate 9.88 mills, 58 children transported, 2.4 buses per school, and transportation expenses of \$3.99 per pupil per month.

Massachusetts. Report of committee on school transportation in Massachusetts. Farmington conference, April 1925. *Boston, Mass., State department of education*. 24 p. (Mimeographed.)

A statistical report of the consolidation and pupil transportation situation in the State. Includes data on numbers and types of schools, buses, and routes and on attendance and costs.

Minnesota. Report of consolidated schools, 1924-25. 9 p. (Mimeographed.) *Minneapolis, Minn., State department of education.* (See similar report for years 1923-24 and 1925-26.)

Sets forth, in tabular and explanatory form, the consolidation situation. The data show large numbers of consolidated schools, enrollment in such schools, pupils transported, school conveyances used, and a larger amount spent for transportation in 1925-26 than in the preceding years.

Oklahoma. DUKE, E. A. School consolidation and transportation of pupils in Oklahoma. 1926. *Oklahoma City, Oklahoma department of education*, 1926. 79 p. (Bulletin no. 113.)

A comprehensive report of Oklahoma's 274 consolidated schools. The study presents information relative to the legal provisions for organizing consolidations, areas of districts, valuations, enrollment, transportation, teaching force, grades maintained, school terms, teachers' homes, and costs. A large table lists each district with itemized information. Many blank forms are included.

Pennsylvania. HALL, WILLIAM F. Rural school consolidation and transportation in Pennsylvania. State college, Pa., 1925. 47 p. *Pennsylvania State college, School of education.* (Research series, vol. 2, no. 2, May 1925.)

Shows status of the consolidation movement giving relevant data.

CONTINUATION SCHOOLS

See also Vocational Education

KERSEY, VIERLING. Savings effected in part-time instruction. *The tax digest*, November 1927, p. 161; *California Taxpayers' Association, Los Angeles.*

Tallies the savings for employers, students, and the public due to part-time education.

U. S. OFFICE OF EDUCATION. Wages of pupils enrolled in graduated-continuation schools. In Industrial education in Buffalo public schools. *Washington, U. S. Government printing office*, 1931. p. 13, 26. (U. S. Office of education. Pamphlet, no. 17, 1931.)

CONTRACTS

CONTRACTS, BOARD OF EDUCATION

See Purchasing Economies

CONTRACTS, TEACHER

See Teacher Contracts

CONTROL OF FINANCE

See Fiscal Control

COST ACCOUNTING

See Accounting, School, Cost, General

COST OF LIVING

BURGESS, Mrs. A. H. Is the public-school system expanding more rapidly than the standards of living? *Colorado school journal*, 43:8-10, May 1928.

California. Cost of Living Studies IV. Spending ways of semi-skilled group. In University of California publications in economics, 5:5, 1931. *University of California, Berkeley, Calif.*

HENDERSON, YANDELL, and DAVIE, MAURICE R. eds. Incomes and living costs of a university faculty. *New Haven, Yale university press*, 1928. x, 170 p. tables, diagrams.

A report made by a committee on the academic standard of living appointed by the Yale university chapter of the American association of university professors. With a foreword by James Rowland Angell.

Minneapolis. Costs and standards of living of Minneapolis teachers. *Monthly labor review*, 23:200-201, November 1926.

A report on a study made by Dr. Royal Meeker in the summer of 1926 at the request of the Central committee of teachers' associations of Minneapolis.

Missouri. RAMSAY, C. H. The cost of living and the economic status of teachers in Missouri. Ph.D. thesis, 1932. *Columbia, Mo., University of Missouri.*

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Cost of living and ability to support schools. *Washington, D. C., National education association*, 1926. p. 68-69. (Research bulletin, vol. 4, nos. 1-2, January, March 1926.)

Teachers' salaries and cost of living. *Washington, D. C., National education association*, 1927. p. 135-80. (Research bulletin, vol. 5, no. 3, 1927.)

Investigates the Nation's ability to pay teachers' salaries comparable to those paid in other professions, and the economic position of public-school teachers. Compares the income and economic position of teachers with other classes of gainfully employed persons in the United States. Discusses obstacles delaying adequate compensation for teachers and devises bases for fixing rates and a classification of school employees as guides to salary scheduling. Includes annotated bibliography.

NATIONAL INDUSTRIAL CONFERENCE BOARD. The cost of living in the United States, 1914-1930. *New York, N. Y., National industrial conference board, 1931.* 170 p.

Continuation of this standard series whose previous numbers are noted in the introduction. Gives general index and subindexes for component parts for every year 1914 to 1930 using 1923 as a base of 100. Appendix gives all indexes for 1930 on base of 1914 as 100, to tie to previous data on that base. Full explanation of theory, sources of data and methods of computation.

New York. **HARRY, D. P.** Cost of living of teachers in New York State. *New York, N. Y., Teachers college, Columbia university, 1928.* 184 p. (Teachers college, Columbia university. Contributions to education, no. 320.)

Devises a method for measuring the cost of living in various localities and an index of the cost of living and recommends that cost of living be considered in the construction of equalization programs. Shows that in New York State the index can safely be based upon food and rent only.

NORTON, JOHN K. Standard of living and standard of educating—have they kept pace? *Journal of educational research, 13: 22-35, January 1926.*

Ohio. **KNIGHT, W. H.** Cost of living of teachers in the State of Ohio. M.A. thesis, 1930. *University of Ohio, Columbus, Ohio.*

Pittsburgh, Pa. Pittsburgh cost of living compared with other cities. *Pittsburgh, Pa., Citizens' committee on teachers' salaries, 1928.* (Series no. 1, bulletin no. 12.) Unpublished.

Purdue University. **ESTES, J. A. and others.** Incomes and costs of living of the Purdue faculty. Report of the faculty committee. *LaFayette, Ind., Purdue University, 1930.* 48 p. (Bulletin, April, 1930.)

Analyzes in considerable detail items of living costs versus incomes. Produces many relevant data.

RAITT, EFFIE I. Teachers' budgets. *Washington education journal, 6: 177-78, February 1927.*

Teachers' salaries and the cost of living. *The Illinois teacher, 14: 163-64, May 1926.*

U. S. DEPARTMENT OF LABOR. Prices, wholesale and retail, and cost of living. *Washington, U. S. Government printing office, June and December of each year.*

The pamphlet issued at these dates gives the index numbers for cost of living for each December, 1914 to 1915, and for each June and each December

since, with the average for 1913 as a base. The material includes separate indexes for the same dates for food, clothing, rent, fuel and light, household furnishing goods, and miscellaneous. These index numbers are for the United States as a whole, but index numbers for individual cities and areas may be located in the other monthly numbers of the series.

COSTS

ECONOMIES

Economy suggestions often occur in references dealing with costs of a specific phase of work, e. g., Budget. *See also Economies.*

BALLOU, FRANK W. Why the cost of public education has increased. *Nation's schools, 1: 24-28, May 1928.*

Better education for Sonoma county youth at less cost. *The tax digest, December, 1926.* p. 192-95. *California taxpayers' association, Los Angeles.*

A brief synopsis of Association Report No. 2 in which the educational expenditures of Sonoma county are analyzed. Comparisons made include teaching load, per-pupil costs, and costs of different schools, curricular offerings, etc.

CHAILMAN, SAMUEL A. An inquiry into the utilizations and the cost of a modern school. *American school board journal, 72: 60-63, January 1926.*

Cost reduction problem in the Cleveland schools. *School and society, 19: 587-89, May 1924.*

An official viewpoint of how economy and its problems can be best utilized in terms of the Cleveland budget for 1924. Instruction economy, its limitations, and its possibilities, is the significant problem treated. Improving the quality of instruction is the one safe basis of economy. The mere saving of money is not necessarily economical in practice.

EVANS, F. O. Your money's worth in education. *Tax digest, 8: 331, September 1930.*

Financing public education. *American educational digest, 47: 350, April, 1930.*

GREGORY, V. J. Minneapolis strikes the economy road. *American school board journal, 69: 55, 132, December 1924.*

High cost of schooling. *School executives magazine, 48: 207, January 1929.*

HUDSON, ROY M. Waste is something unused. *Tax digest, 5: 186, December 1927.*

KEITH, J. D. Costs and economies of education. *Tax digest, 8: 218, June 1930.*

LONGSTREET, R. J. Are Florida public schools costing too much? *Journal of the Florida education association*, 6:7, 30, February 1929.

MORRISON, HENRY C. The management of the school money. *Chicago, Ill., University of Chicago press*, 1932. 522 p.

Contains in many places original theoretical treatments with practical applications constituting a "plea for retrenchment in needless and uneconomical expenditure."

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. School costs and economy in public expenditures. *Washington, D. C., National education association*, 1926. p. 249-58. (Research bulletin, vol. 4, no. 5, November 1926.)

One hundred and twenty-two reasons why taxpayers boost school costs; thirty ways educators may reduce them. *Public service*, 376: March 25, 1924.

Proposed economies in school administration costs. *American school board journal*, 68:66-67, May 1924.

School costs. *American educational digest*, 47:257-58, February 1928.

Source of easy graft. *School executives magazine*, 49:327, March 1930.

This philosophical examination of American school finance procedures describes the expansion of educational services as a "magnification process" used by school officials to graft public-school funds.

THOMAS, O. R. Complete low-cost school. *American school board journal*, 80:64-65, February 1930.

This article explains how Montezuma, Iowa, built a small school at a low cost, using qualified school architects to plan it and select the materials. Gives table with financial transactions involved, featuring an average cost of 21.5 cents per cubic foot for 39 rooms.

TRENHAM, N. BRADFORD. Back to normalcy in school finance. *Tax digest*, 8:133, April 1930.

Can educational costs be cut? *Tax digest*, 8:372-74, October 1930.

FOREIGN

Costs of elementary education in various countries. *Elementary school journal*, 28:83-85, October 1927.

Calls attention to the fact that the educational programs and the organization of the various nations are by no means comparable. In doing this gives some per pupil cost statistics for England and Wales, France, Prussia, Norway, Sweden, Denmark, Holland, Italy, Czechoslovakia, Belgium, Canada, Australia, New Zealand and South Africa.

Education costs. *Scottish educational journal*, 9:767, August 13, 1926.

England. Average per capita cost of education in the United States and in England. *School executives magazine*, 49:555, August 1930.

A statistical study comparing costs of education in the United States and England. In the United States per capita costs exceeded those in England in every comparison made except that in American cities of 10,000 to 30,000 population the cost was less than in London.

Cost of education in England. *School and society*, 12:32, January 19, 1924.

DICKSON, ROBERT. The cost of elementary education in England. *Scottish educational journal*, 7:66, January 18, 1924.

Education costs in Great Britain. *School and society*, 27:716-17, June 16, 1928.

Great Britain. English costs. *Scottish educational journal*, 9:714, July 23, 1926.

High cost of education. *Canadian school board journal*, 3:6, 8, October 1924.

Philippine Islands. Department of education. Report of director of education. Thirty-first annual report, 1930. *Manila, Bureau of printing*, 1931. 213 p.

Tabulates statistics of total school expenditures and per capita and per pupil school costs in the Philippine Islands from 1925-1929, and analyzes expenditures into salaries, outlay, and other expenses.

GENERAL

For the costs of any particular item, e. g., Buildings or instruction, see that head. See also Costs, Methods of Calculating; Costs, Public Relations

AARON, MARCUS. Crippling our own children. *Balance sheet*, 5:4-9, March 1924.

Alabama. Why schools cost more. *Alabama school journal*, 47:19-21, October 1929.

Annual public expenditures for education. *School and society*, 26:98-99, July 23, 1927.

Are we spending too much or too little on our public schools? *American city*, 40:114-15, March 1929.

Using data compiled by the National Education Association, this article compares educational need with educational support. Calls attention to recent increases in school attendance, improvements of sites and equipments, rising standards for teachers and curriculum, and to the fact that school expenditures

do not exceed the general ability to pay. States that a desirable educational goal has not yet been reached.

Arizona. Educational Costs in Arizona. *The tax digest*, October, 1927. p. 112. *California taxpayers' association*, Los Angeles.

Shows wide variations in educational costs per capita in Arizona. Part of this attributed to lack of centralized purchasing.

Average per capita cost of education in the United States and England. *School executives magazines*, 49: 555, August 1930.

Compares the average per capita costs of elementary education in 170 typical American cities with similar costs in England for 1928. Analyzes distribution of the costs.

BURROWS, A. S. The teacher, taxation and school costs. *Washington education journal*, 3: 201-202, March 1924.

California. LACY, JAMES SAMUEL. The depression and school costs. *The tax digest*, March, 1932. p. 83. *California Taxpayers' Association*, Los Angeles.

The startling increase in the cost of public education in California since 1910; the reasons for it; the loose thinking and easy-going attitudes that characterized it; the present necessity for retrenchment; and how it may be and is being done.

TRENHAM, N. BRADFORD. High schools cost \$192 per pupil. *The tax digest*, March, 1930. p. 102. *California Taxpayers' Association*, Los Angeles.

Shows total expenditures for education in California excluding capital outlays and transfers by counties for kindergarten, elementary, and high schools. The years 1928 and 1929 are compared. Per unit of attendance costs are shown also. Despite the increased attendance and the increasing value of the dollar the unit costs continued to mount.

Trend of educational costs in California. *The tax digest*, February, 1930. p. 68. *California Taxpayers' Association*, Los Angeles.

Compares the 58 counties of California with each other for 1928 and 1929 in the following items: Assessed valuation, average daily attendance, number of teachers, teachers load, and valuation per unit of attendance. The low teaching loads are apparent.

CLARK, H. F. Index numbers of costs in education. *Teachers college record*, 30: 578, 681, 794, March, May 1929.

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FARRAR, R. M. Mounting costs of public education. *Texas outlook*, 12: 11-13, 25, July 1928.

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- MOEHLMAN, ARTHUR B. Cost trends. In *his Public-school finance. New York, N. Y., Rand McNally*, 1927. p. 86-102.
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enrollment and school services; the depreciated dollar; and a 124 per cent rise in per pupil taxable wealth. The ratio of increase due to enrollment multiplied by that of depreciation of the dollar and taxable wealth gives an index of justified school costs.

What price education; is the interest in athletic sports overshadowing that of education? *Missouri school journal*, 45: 8, January 1927.

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METHODS OF CALCULATING

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Shows the degree to which a given community can finance a program of public education and how moneys furnished by the community may best be distributed among the various phases of the educational programs offered. The author points out that the budget maker should be an expert in school finance. He finds that expenditures for schools in cities of 10,000 to 30,000 population

are determined by what the people want, rather than by what is economically feasible. Contains many original data from 81 cities (1912-1922) on measures of efficiency, expenditures, and definitions explaining terms pertaining to enrollment, attendance, teachers, school officials, classification of expenditures, etc.

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EVANS, F. O., Teachers' load and the school budget. *The tax digest*, June, 1930, p. 205. *California taxpayers' association, Los Angeles*.

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MOEHLMAN, ARTHUR B. Public-school finance. *New York, N. Y. Rand McNally*, 1927.

Pages 52-63 (Theory of educational costs) give a clear presentation of the theory of educational costs from three viewpoints: (1) raw money, (2) cost in relation to classroom achievement, (3) costs in relation to the ultimate social effects of the school upon society.

Pages 64-65 (Cost Method) discuss the method of determining educational costs, when considered in two divisions: (1) the validity of the several methods of computing costs through a comparison of two hypothetical cities, and (2) the specific rules defining cost terms and cost types.

MORRISON, HENRY O. The management of the school money. *Chicago, Ill., University of Chicago press*, 1932. 522 p.

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PUBLIC RELATIONS

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CRAFTREE, J. W. Another angle on school costs. *Journal of Arkansas education*, 7: 17, April 1929.

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DES MOINES PUBLIC SCHOOLS, IOWA. BOARD OF DIRECTORS. How much do our schools cost the taxpayer? 43 p. Issued by the board of directors, *Des Moines public schools*, March 1932.

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- HANLON, WILLIAM H. Educational costs. *Tax digest*, 9: 15-16, January 1931.
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- High cost of learning. *New student*, 7: 3-4, April 25, 1928.
- HORBA, S. H. The cost of public education. *University of North Carolina News letter*, 10: 1, March 19, 1924.
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- ILGEN, V. C. Are increased public school costs justified? *Missouri school journal*, 46: 10-12, December 1928.
- Increase of expenditure for education. *School and society*, 30: 54-55, July 13, 1929.
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- JENSEN, GEORGE C. Attack on California schools exposed. *Sierra educational news*, 23: 86-92, February 1927.
- JOHNSON, THOMAS E. Increased expenditure necessary to meet demands of civilization. *School bulletin*, St. Paul, 9: 2-3, November 1926.
- KEITH, J. D. Costs and economies of education. *Tax digest*, 8: 218-21, June 1930.
- KNUDSEN, C. A. As others see us. *Journal of Arkansas education*, 8: 11-12, February 1930.
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- LONGSTREET, R. J. Are Florida public schools costing too much? *Journal of the Florida education association*, 6: 7, 30, February 1929.
- NATIONAL EDUCATION ASSOCIATION. Causes of the growth in school costs. Washington, D. C., *National education association*, 1926, p. 249-55. (Research bulletin, vol. 4, no. 5, November 1926.)
- RESEARCH DIVISION. Investing in public education. Washington, D. C., *National education association*, 1930, p. 168-217. (Research bulletin, vol. 8, September 1930.)
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- Taking stock of the schools. Washington, D. C., *National education association*, 1925, 32 p. (Research bulletin, vol. 3, no. 3, May 1925.)
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- New Jersey. How the New Jersey governmental dollar was spent in 1928-29. *Education bulletin*, 16: 638-46, May 1930.
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- NORTON, J. K. Cost of public education from the viewpoint of schools. *Texas outlook*, 14: 57-58, July 1930.
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Brief abstract from an article on the cost of public education from the viewpoint of business. Points out that the layman, skilled in matters of financial management, can bring valuable experience to the fiscal problems of the public schools.

RICE, THURMAN B. The cost of an old schoolhouse. *Indiana teacher*, 71: 28, November 1926.

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SAMMONS, H. L. Layman never forgets cost, says Sammons. *School topics*, 12: 1, 4, May 13, 1930.

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SUZZALLO, HENRY. A dollar's worth of education. *Sierra educational news*, 22: 631-33, December 1926.

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West Virginia. Criticism of school costs unwarranted. *Educational news*, 2: 2-3, January-February 1927.

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WOODS, BALDWIN M. Overproduction in education. *The tax digest*, April, 1931. p. 114. *California taxpayers' association*, Los Angeles.

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Wyoming. Are Wyoming schools extravagant? *Wyoming educational bulletin*, 6: 3-4, November 1924.

STATISTICS

See also Costs, General. For Statistics on costs for any item, e. g., City Schools of States, see that item

[The best general sources are the bulletins of the United States Office of Education and the research bulletins of the National Education Association. See State School Systems, Statistics; City School Systems, Statistics; Secondary Education, Statistics, and the like. The data in the bulletins of the National Education Association can be located through the index at the end of each volume]

Fiscal aspect of education; expenditures for schools (1890-1925); comparative support of education by States (1924); source of revenue (1925); systems of public-school support (1926); public aid to colleges (1922-23). In The cost of government in the United States. New York, N. Y., National industrial conference board, inc. 1927. p. 147-90.

NATIONAL EDUCATION ASSOCIATION. DEPARTMENT OF SUPERINTENDENCE. Present distribution of expenditures for education. In National education association. Department of superintendence. Ninth yearbook, 1931. p. 315-39.

COUNTY

GENERAL

See Rural, County Unit, General

SURVEYS

Arizona, Coconino county. STEVENSON, R. G. A financial survey of the schools of Coconino county, Ariz., and recommendations based upon the findings. Unpublished Master's thesis. Library, University of Arizona. 1931.

Arkansas, Ashley county. LITTLE, HARRY ABNER. A definite educational program for Ashley county, Ark. Master's thesis, 1926. Nashville, Tenn. George Peabody college for teachers.

Presents in detail data relating to school costs in a rural county. Includes items on school tax, teachers' salaries, and income per district.

California, Kern county. Kern county report. An analysis of the expenditures of Kern county, Calif., for the fiscal year 1925-26. May 1927. Los Angeles, Calif., California taxpayers' association. 78 p.

A detailed study of the county's business, including the administration and cost of the various types of schools. Recommendations include a continuation

of the policy of unionization of small schools to reduce per capita costs, more careful administration of pupil transportation, elimination of small classes in large schools, etc. (Other studies made by the California taxpayers' association, similar to the Kern county study, are those of Santa Rosa, Santa Paula, San Diego, and Santa Barbara.)

Santa Barbara county. Report on Santa Barbara county, Calif. *California taxpayers' association, Los Angeles*. Report no. 19, February 1929. 154 p. tables, diagrams. (See also similar studies of other California counties.)

One section, covering 43 pages, concerns administrative educational problems. Sets forth a practical plan in detail for consolidating small elementary schools whereby a saving of \$25,850 in teachers' salaries would be effected. A saving of \$12,389.17 would result if school-owned buses were operated at the same average cost as that of contract buses.

The findings of the Santa Barbara county study. *Tax digest*, 7: 151-59, May 1929.

Florida, Duval county. STRAYER, G. D. and ENGELHARDT, N. L. Survey of the schools of Duval county, Fla., including Jacksonville. *New York, N. Y., Teachers college, Columbia university, Bureau of publications*, 1927. Chapter 8 of the School survey series. (Also Teachers college, Columbia university, bulletin no. 375, p. 101.)

Presents, by means of statistical data for 1925-26, the money-getting and money-spending activities of the public schools. Jacksonville's ability to support schools is shown by a comparative study of the financial data of comparable cities in other parts of the country.

Marion county. GEIGER, M. P. and TURNER, R. L. Consolidation, finance, and illustrated exhibit of schools of Marion county. *Tallahassee, Fla., State department of public instruction*. [Florida school bulletin, vol. II, no. 3, January 1926.] 84 p.

A comprehensive study including many data on consolidation of schools. This movement "has been steadily growing in favor with the people of the county. Schools have been united every year since the movement began, and very little consolidation has been undone. . . ."

Indiana, Hancock county. Hancock county school bulletin. *Hancock county, Board of education*, 1923.

Louisiana, Washington parish. FOOTE, JOHN M. An administrative and financial study of the Washington parish school system. *Baton Rouge, La., State department of education*, 1927. 100 p. (Bulletin no. 112.)

A study of the educational facilities in Washington parish, La. Sets forth

through tables, description, and maps the situation in regard to organization, administration, finance, and needs of the schools. Recommends closer supervision of attendance, transportation, and finance by the parish board of education and the parish superintendent of schools.

Montana, Judith Basin county. SYKES, EARL F. An educational survey of Judith Basin county, Mont. Thesis, *University of Montana, Missoula, Mont.* 1931.

Some financial aspects are considered for the local area.

New Jersey, Lawrence township, Mercer county. ENGELHARDT, N. L., and EVENDEN, E. S. Report of the survey of the public-school system of Lawrence township, Mercer county, N. J., 1921-22. *Institute of educational research, Division of field studies, Teachers college, Columbia university, New York city*. 1921-22. 128 p.

North Carolina, Lenoir county. BROADEN, L. C. and others. Survey of the public schools of Lenoir county. Raleigh, State superintendent of public instruction, 1924. 233 p. illus. *North Carolina Department of education*. (Educational publication no. 73. Division of supervision no. 17.)

Ohio, Bellefontaine county. McCracken, Logan and Bellefontaine counties, Ohio school survey, *Columbus, Ohio, F. J. Heer printing co.*, 1923. p. 48-52.

Cuyahoga county. BAER, JOSEPH A. A study of the finances of the schools comprising the county school district of Cuyahoga county, Ohio.

Delaware county. WERSTLER, LEONARD L. A survey of public-school finance in Delaware county, Ohio, 1927-28. M. A. thesis, 1929. *Columbus, Ohio, Ohio State university*.

Fairfield county. A cooperative study of certain phases of the Fairfield county, Ohio, school system, by Charles McCracken, J. C. Morrison, and Ward G. Reeder. *Columbus, Ohio, Ohio State university*, 1925. p. 63-65.

ANKENBRAND, WILLIAM WARD. A survey of public-school finance in Fairfield county, Ohio. M. A. thesis, 1925. *Columbus, Ohio, Ohio State university*.

Oklahoma, Garfield county. DAVIS, GILBERT LAWTON. Educational inequality in Garfield county, Okla-

homa. Master's thesis. *Library, University of Oklahoma*, August 3, 1931.

— Tulsa county. DAVIS, RAYBURN S. A study of the financial factors affecting the schools of Tulsa county, Oklahoma. Master's thesis. *Library, University of Oklahoma*, July 21, 1931.

Pennsylvania, Lackawanna county. FRANCIS, THOMAS and NORTHUP, E. M. Survey of the one-teacher elementary schools of Lackawanna county, Pa., 1926. *Scranton, Pa., County superintendent of schools*, 23 p. tables, diagrams, graphs.

A study to show present conditions of the one-teacher buildings in order that recommendations for improvement and consolidation might be made. Forty-five 1-teacher schools maintained in 12 different districts. Some situated on grounds of less than 1 acre. Recommendations include beautification of grounds and better selection of site.

South Carolina, Oconee county. Public-school survey of Oconee county, South Carolina. *Clemson college, Clemson agricultural college, division of education*, 1923. p. 236-52.

Tennessee, Crockett county. Educational economic and community survey of Crockett county, Tennessee, by B. V. Duggan. *Knoxville, Tenn., University of Tennessee*, 1924. (University of Tennessee record. Extension series, vol. I, no. 3.)

— Union county. Educational survey of Union county, Tennessee. *Knoxville, Tenn., University of Tennessee*, 1923. (University of Tennessee record. Extension series, vol. I, no. 2.)

Texas, Caldwell county. The schools of Caldwell county, Tex. *San Marcos, Tex., Southwest Texas State teachers college*, 1923. p. 10-11. (Southwest Texas State teachers college. Bulletin, vol. 13, no. 3.)

Virginia, Louisa County. VIRGINIA STATE BOARD OF EDUCATION. Louisa county, educational survey report, 1928. *Richmond, Va., State board of education*, 1928. 30 p. (Bulletin, vol. X, no. 1.)

West Virginia, Arlington County. PHILLIPS, FRANK M. and DEFFENBAUGH, W. S. Report of the school building needs and school finances of Arlington county, Va. *Washington, U. S. Bureau of education*, 1930. 20 p. tables. (Mimeographed.)

— CAVINS, L. V. A school survey of type counties of West Virginia.

West Virginia, State department of schools, 1923.

COUNTY UNIT

See Rural county unit

CRIPPLES, SCHOOLS FOR

AID

See State Aid, Crippled children

COSTS

HECK, ARCH O. The cost of educating crippled children. *Washington, U. S. Government printing office*, 1930. p. 33-37. (U. S. Office of education. Bulletin, 1930, no. 11.)

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KEESECKER, WARD W. Digest of legislation for education of crippled children. *Washington, U. S. Government printing office*, 1929. p. 1-13. (U. S. Office of education. Bulletin, 1929, no. 5.)

Study of legislation for education of crippled children. Brief historical summary since 1897. In 1927 all States except Connecticut, Delaware, Kansas, Maryland, Kentucky, Vermont, and Washington cooperated with the Federal Government under terms of National Civilian Vocational Act. Tendency is to provide education through special classes in local districts. Digest of laws in 21 States under three heads: (1) Local aid, (2) State regulation, (3) State aid.

WHITE HOUSE CONFERENCE. Special education, the handicapped, and the gifted. p. 5-6. *New York, Century co.* 1931.

Gives school costs for blind, deaf, and crippled children.

CURRENT EXPENSE

COSTS

Changes in cost of education for current running expenses. *Denver, School review*, 10:1-2, November 1927.

COMSTOCK, L. M. Current expenses per student in 52 cities of 100,000 population and more. *Washington, U. S. Government printing office*, 1931. Group I. p. 6-12. (U. S. Office of education. Pamphlet, no. 19, April 1931.)

MORRISON, HENRY C. Operating cost. *In his* The management of the school

money. *Chicago, Ill., University of Chicago press, 1932.* -p. 147-74.

An original theoretical treatment with practical illustrations of what should constitute current or running expense.

NATIONAL EDUCATION ASSOCIATION. EDUCATIONAL RESEARCH SERVICE. Cost per pupil in average daily attendance, for current expenses; for 100 cities, 1924-25 and 1925-26. *Washington, D. C., National education association, 1926.* 3 p.

Ratio of current school expense to current city and school expense, 1924. *Washington, D. C., National education association, 1927.* 6 p. (No. 1, 1927.)

Nebraska. HETRICK, C. S. Six-year study of current expense costs in Nebraska schools having from eleven to twenty teachers. *Educational research record, 3: 163-70, April 1931.*

With data for the years 1923-1929, this study analyzes the costs of Nebraska schools which have from 11 to 30 teachers. Gives figures for expenditures per pupil in average daily attendance, for elementary schools, high schools, and total current expense. Tabulates the distribution of expenditures among the six divisions of current expense.

North Carolina. STATE DEPARTMENT OF EDUCATION. DIVISION OF FINANCE AND STATISTICS. Actual expenditures for current expense in special charter schools—six months' term: 1928-1929. *Raleigh, N. C., State department of education, 1930.*

PHILLIPS, FRANK M. Total current expenses and outlays. In *Statistics in State school systems, 1927-28. Washington, U. S. Government printing office, 1930.* Table 28. p. 44-50. (U. S. Office of education. Bulletin, 1930, no. 5)

STATISTICS

[These will be found for the total and subdivisions in the State and city school statistics bulletins of the U. S. Office of education. See *State Statistics and City School Statistics*. Current expenses statistics are frequently published also in the research bulletins of the National Education Association, traceable through the index at the end of each volume. See also *City School Costs, statistics*]

CURRICULUM

BAWREN, W. T. Applying the remedy of high per capita costs—is increased enrollment the way out? *Industrial education magazine, 36: 305-8, March 1928.*

Discusses decreasing per capita costs of instruction through the curtailment of

the special subjects in the curriculum. Points out that an increase in enrollment per teacher in shop work and drawing would result in the overloading of teachers or a modification of the entire manual arts program. This would change the material aspect of the manual arts shop by curtailment of variety of experience, modification of equipment, and use of instructional helps and longer shop periods.

BOYNTON, FRANK D. Education: What program? What price? *School executives magazine, 48: 302-4, 322, March 1929.*

California. Curricular economies. California schools, *State department of education. Sacramento, Calif., March 1932.* vol. 3, no. 3, p. 70.

CAWTHON, W. S. Curriculum revision and school finances. *Journal of the Florida education association, 8: 5-6, January 1931.*

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TOUTON, FRANK C. California curriculum study. *The tax digest, April, 1927, p. 137-38; California taxpayers' association, Los Angeles.*

Reveals some of the wastes of educational expenditures due to improper curriculum construction.

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BRAY. Pensions for those long employed in schools for the deaf. *American annals of the deaf, 69: 201-23, May 1924.*

PHILLIPS, FRANK M. City schools for the deaf, 1927. Cost per pupil. In *Statistical summary. Washington, U. S. Government printing office, 1930.* Table 2. p. 3. (U. S. Office of education. Bulletin, 1930, no. 3)

Similar data for previous years in corresponding bulletins.

PITTINGER, OSCAR M. Pensions as applied in various States for schools for the deaf. *American annals of the deaf, 72: 185-202, March 1927.*

WHITE HOUSE CONFERENCE. Special education, the handicapped and the gifted. p. 5-6. *New York, Century co. 1931.*

Gives school costs for blind, deaf, and crippled children.

DEBT SERVICE

See *Borrowing and its subheads*

ECONOMIC PHASES

For economic phases of any item, see that item. See also Values of Education

- ALTHAUS, CARL B. Some facts regarding economic conditions in Kansas and their relation to financing the public schools of the State. *Kansas State teachers association, Topeka, Kans., 1932*. p. 32.
- Excellent example of a thorough study of school finance possibilities in the depression with the resulting decreased ability to support schools.
- ANDERSON, C. R. Should teachers salaries be reduced to meet the present economic depression? *American school board journal*, 81: 41-42, December 1930.
- BETELLE, JAMES O. Ways and means of increasing school facilities in times of business depression. *American school board journal*, 84: 29-31, 68, January 1932.
- Discusses increased utilization of existing plant, minor changes and alterations, additions, and new construction.
- CARVER, T. N. The vanishing farmer. *World's work*, September, 1928. p. 505-11.
- Discusses the economic importance of meeting rural school needs.
- CHANCELLOR, WILLIAM E. Economic stability and school costs. *American school board journal*, 76: 149, May 1928.
- CLARK, HAROLD F. The effect of population upon the ability to support education. *Bloomington, Ind., University of Indiana*, 1925. p. 1-29. (University of Indiana, School of education. Bulletin, vol. 2, no. 1, September 1925.)
- Emphasizes the importance of the ratio of children to adult population as a factor in determining the ability of a community to support education. Develops formula, the use of which, it is contended, in connection with figures for per capita wealth, provides a more adequate measure of ability to support education than has hitherto been available.
- COMMITTEE ON RECENT ECONOMIC CHANGES, HERBERT HOOVER, chairman. Recent economic changes. *National Bureau of economic research, 51 Madison Avenue, New York city*. 900 p. 2 volumes.
- Includes committee's recommendations based on factual material for the following topics: Changes in consumption and the standard of living; new and old industries; technical changes in manufacturing industries; specific changes in certain technical production factors; the changing structure of industry; construction; transportation; marketing; labor; management; agriculture; price movements and related industrial changes; money and credit and their effect on business; foreign markets and foreign credits; the national income and its distribution; how matters stood in the spring of 1929.
- COOPER, WILLIAM JOHN. Purchasing power: Education creates it. *School Use*, 17: 1-2, September 1931.
- Facts and arguments to support effectively the statement "that every dollar invested in education brings returns to American business by creating a high standard of living."
- DEAN, A. D. If education were a business. *Journal of education*. 109: 346. March 25, 1929.
- Does our present system of school finance show signs of breaking down? *Western school journal*, 26: 189-90, May 1931.
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- Quotations from books classified as "Economic Theory since 1875" on the economic effects of schooling in general, taken from the works of 68 economists and arranged in alphabetical order by authors.
- ELLIS, A. C. Oldster's obligation; new psychological, social, and economic bases for adult education. *Journal of adult education*. 1: 262-67, June 1929.
- ENGELHARDT, FRED. The schools during economic depression. *American school board journal*, 83: 25-27, December 1931.
- Indicates the fallacies underlying the common attacks on the schools and these issues which must be clearly understood and intelligently defended. The average citizen and school board member does not know the relative value of the school services, but is more interested in times of crises than ever before.
- FINDLAY, J. J. The economics of education. *In his Foundations of education*. *New York, N. Y., Holt*, 1925. vol. 1. 219-51.
- HAIG, ROBERT M. Land economics. *American economic association papers and proceedings*, 39-40: supplement no. 5-9, March 1927-28.
- Discusses three general methods (the price method, the special assessment method, and the general taxation method) of paying for public improvements. Points out that according to our present analysis of the behavior of urban land values, these methods are quite inadequate to serve as the basis for the formulation of a sound and defensible program for financing a comprehensive city plan.
- Higher education. Lower wages. *Survey* 65: 309, December 15, 1930.

LAFOLLETTE, ROBERT M. Education for a changing economic world. In National education association, Department of superintendence official report. 1932. Washington, D. C., February 1932. p. 143-45.

MORRISON, HENRY C. Liquidating the economic cost. In *his* The management of the school money. Chicago, Ill., University of Chicago press, 1932. p. 41-69.

Argues that the aggregate of local school systems produces only a minor fraction of what it might produce nor can it do much better until there are better State and national organizations. Shows that schools can pay their way by improving demand, inculcating thrift, preventing overpopulation, expanding professional vocations, and creating economic intelligence.

School revenues. Chicago, Ill., University of Chicago press, 1930. p. 18-70.

Discusses wealth and income of the United States, probable causes of increase in real income, the economic significance of the educational financial burden, and contends that school support does not financially deplete the national income. Concludes that the school is economic in nature and must pay its own way.

The economic cost of schools. In *his* The management of the school money. Chicago, Ill., University of Chicago press, 1932. p. 26-39.

Argues that the school must produce in economic value as much as it consumes. Analyzes school system economic costs into services and goods used up in operation, the use of land occupied by schools, and the use of capital invested in schools.

NATIONAL BUREAU OF ECONOMIC RESEARCH. 51 Madison Avenue, New York City.

From 1921 to date, this organization has issued very valuable volumes, dealing mainly with income, business cycles, and related topics. It made the study for President Hoover's Committee of recent economic changes. Complete list sent free on application to the bureau.

NATIONAL EDUCATION ASSOCIATION. Childhood and the depression—a look ahead. Washington, D. C., National education association, November 1931.

Discusses reduction of teachers salaries, reduction of educational services, State school legislation growing out of the depression, increased responsibilities of the schools and, the protection of essential educational services.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. A picture of world economic conditions. New York, N. Y., National industrial conference board, inc., 1928. p. 33-39.

Shows clearly, by means of statistical data, the trends in economic conditions

in the United States during the first six months of 1928 in employment, wages and cost of living, industrial activities, price movements, foreign trade, loans to foreign countries, and credit position.

A picture of world economic conditions at the beginning of 1929. New York, N. Y., National industrial conference board, inc., 1929.

An examination of economic conditions in Great Britain, Germany, France, Italy, Belgium, Sweden, Netherlands, Denmark, Switzerland, Austria, Czechoslovakia, Russia, Canada, Mexico, Argentina, Brazil, Chile, Colombia, Australia, Japan, China, and the United States at the beginning of 1929. Involves industry, commerce, tariff, wages, unemployment, foreign trade, costs of living, and politics.

NORTH CAROLINA. HOBBS, SAMUEL HUNTINGTON, jr. North Carolina, economic and social. Doctor's thesis, University of Wisconsin. Chapel Hill, N. C., The University of North Carolina press, 1930. 403 p.

NORTON, JOHN K. Major issues in school finance. Washington, D. C., National education association, 1926. (Research bulletin, vol. 4, no. 5, November 1926)

A study, under two main headings, (1) the Nation's economic ability to meet school costs, and (2) school costs and economy in public expenditures, of the ratio of school costs to income and wealth, the value of education versus its cost, the economic effect of increased school expenditures, causes of growth in school cost, economy in Federal expenditures and school costs, and the effect of the war on national and school expenditures. Education is evaluated in terms of social and economic contributions. Statistics and graphs supplement the discussion.

The ability of the States to support education. Research bulletin, National education association, vol. 4, nos. 1 and 2. January-March 1926. 85 p.

Valuable pioneer study comparing the States on economic resources in 1922 using wealth and income as measures. Computes the educational load in each State and relates this to the State's ability to support schools. Discusses accompaniments of differences in ability and unmeasured factors affecting it. Bibliography of 73 annotated references.

SEXSON, J. A. The school in time of economic depression. Los Angeles school journal, 14: 36, 38, 40, 42. April 27, 1931.

STRAYER, GEORGE D. The contribution of public education to the welfare of the nation. School and society, 84: 307-11, September 5, 1931.

A considerable showing of items to indicate that public education has made the kind of contributions expected of it as the "foundation upon which the democratic State is built." Suggestions for future.

THOMPSON, M. O. The economic basis of education. In National association of state universities. Proceedings, 1911. Vol. 9, 1911. p. 21-38.

Reviews and analyzes the theories and purposes which have directed the development of educational support and administration in America and points out some of the resulting economic values resulting from the educational program.

Washington. MAESH, ARTHUR L. School support in relation to economic power in Washington. *Washington education journal*, 6: 199-200, March 1927.

WOODHOUSE, Mrs. CHASE (Going). Demand for college-trained women in the United States. *Bulletin of the American association of university professors*, 17: 316-18, April 1931.

ECONOMIES

FOREIGN

How Europe views economy in education. *American school board journal*, 73: 73, July 1928.

Asks if comparatively wealthy America can afford to prepare her citizens less generously than do both England and Germany. Explains that in these Nations the attitude is assumed that even in a time of economic stress, to reduce school expenditures is to reduce the health, physical, mental, and moral strength of the coming generation. States that this is a policy which no Nation with either humanity or wisdom can afford to pursue.

GENERAL

For Economies on Any Item, See That Item. The following heads have subheads on economies: Budget, Building costs, Consolidation Costs, Costs, Equipment, Maintenance, Operation, Purchasing, Research, Salaries, Secondary Education, Supplies; Transportation. See also Borrowing, When; Efficiency Measures, Finance; Safe-guarding Funds; Waste.

ALEXANDER, CARTER. School expenditures and the public. *Teachers college record*, 26: 17-26, October 1924.

ALLEN, RICHARD D. Cutting down unnecessary school costs. *Vocational guidance magazine*, 3: 274-77, May 1925.

BRIGGS, THOMAS H. Cooperating in economy. *School and society*, 34: 718-724, November 28, 1931.

An unusually thought-provoking article with plenty of practical suggestions for carrying out the author's advice to North Carolina: "As in economics, so in education it must get down to the bedrock of facts and with the tentative blueprints of the whole structure build with the principles of common sense and social idealism. . . . While cooperating in economy, be audacious to lead."

BRINTNALL, R. W. Saving Seattle school money. *American school board journal*, 70: 42, 135, March 1925.

BUCKINGHAM, B. R. and REEDER, WARD G. A study of school economies. *Educational research bulletin, Ohio State university*, 4: 67-70, February 18, 1925.

California. KERSEY, VIERLING. First things first in education. California schools. *State department of education*. p. 59-80, March 1932. Also reprinted.

A very practical discussion of all important economies that do and those that do not, involve curtailment of school activities, favoring the latter. Special reference to California, but helpful anywhere.

STAFFELBACH, ELMER H. Educational economies in California. *Sierra educational news*, 27: 18-20, December 1931.

Presents results of a questionnaire study. Replies from 86 school administrators in California shows that 46 school systems had inaugurated economy programs for the year 1931-32. Economies are listed.

CALIFORNIA TAXPAYERS' ASSOCIATION (Report No. 1), Sonoma county Report. Los Angeles, July 1928. Section on education. p. 2-15.

Although a study of the expenditures of county government, the report deals primarily with school expenditures, giving not only recommendations for reducing costs of education but also of increasing educational opportunity.

CAMP, FREDERICK S. and others. Report of special committee on emergency finance. *Hartford, Conn. Association of public-school superintendents*, 1932. 17 p. (Multi-graphed, February 5, 1932.)

Points out under 6 main heads economies which may be realized in school administration. Contains many relevant data.

CHICAGO SCHOOL BOARD. Statistical bulletin, 1931, no. 15.

A survey of the extent of nonpromotion in the city schools of Chicago during the first semester of the school year 1930-31, showing the costs of ineffective teaching and the savings which could be effected by more efficient teaching. Shows that approximately 5 per cent of the pupils failed in the system as a whole.

CLARK, H. F. Improvements which can be made in the expenditure of money for schools. In National education association. Department of superintendence. Official report, 1930. *Washington, D. O., National education association*, 1930. p. 217.

A brief discussion of two kinds of improvements which can be made in school expenditures, buying more cheaply and

more efficiently, and giving more careful consideration to purchasing. Concludes that the greatest improvement can be made through the latter, for it is an imperative need of education to re-plan in terms of the occupational and economic needs of the group.

CLIFTON, A. R. How to measure educational standards. *Nation's schools*, 4: 57, August 1929.

COOK, K. M. By what standards shall school standards be measured? *School life*, 11: 55, October 1925.

Cost reduction problem in the Cleveland schools. *School and society*, 19: 587-89, May 17, 1924.

Des Moines. How much do our schools cost the taxpayer? *Board of Directors, Des Moines public schools*, 1932. p. 43.

Excellent example of a defense of school costs in one city by an economy showing, as compared with similar cities. Good heads, tables, graphs, and typography.

DIXON, A. H. How taxes may be reduced. *Ohio teacher*, 44: 202-4, January 1924.

Economic administration. *School executives magazine*, 49: 294-95, February 1930.

Economies within the power of school directors. *American school board journal*, 80: 44, February 1930.

Economy and efficiency as factors in the business management of Sacramento public schools. *American school board journal*, 76: 104, January 1928.

Economy in education. *Popular educator*, 43: 459, April 1926.

ENGELHARDT, N. L. Financial economies which may be effected through improved business administration. *School executives magazine*, 51: 99, 101, 132, 136, November 1931.

A significant statement of the true economies possible through intelligent application of sound principles in budgetary procedure, administration of tax levy and collection, purchase of equipment, services and supplies, and in safeguarding public funds. Bibliography.

GOODRICH, T. V. How 135 superintendents reduced school costs. *School executives magazine*, 51: 243-45, 270, February 1932.

A questionnaire report of recent school economies which, it is claimed, do not greatly sacrifice educational values.

GOULD, H. R. How Eugene, Oreg., lowered costs. *Journal of education*, 118: 401-2, April 18, 1931.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. *University of Nebraska, extension division, Lincoln, Nebr.*: 1932. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)

Criteria for determining the genuineness of an economy. Practical suggestions and citations from authorities on how to secure economies and a check list for knowing when economies are secured, for each of 12 important phases of school administration. The material for each phase is cited in connection with it in this bibliography.

HOLMSTEDT, R. W. Financial economies for public schools. *Bloomington, Ind., University of Indiana*, 1931 p. 1-11. Mimeo.

A bibliography of 226 references and some with subdivisions (1913-1931) on financial economies for public schools numerically, alphabetically, and topically arranged by author, title, or publication with number.

Financial economies in business management of schools. In Review of educational research. Finance and business management number. *Washington, D. C., National education association*, 1932. Chapter VIII. (In press.)

Running review and bibliography stressing 1923 to fall of 1931.

How one community met its problem for increased financial support: the Carbondale school situation and its solution of the problem. *American school board journal*, 78: 96, June, 1929.

Describes the publicity technique used by a school board to procure a tax levy sufficient to meet the increasing demands made on a school.

HUNTER, FRED M. Efficient expenditures of school moneys. *American school board journal*, 76: 43-44, May 1928.

Discusses such causes of extravagance in school administration as excessive overhead costs, failure to properly assign the teaching service, and playing politics. Recommends a single-headed control as the means of eliminating these unnecessary costs.

IVES, C. A. Shorter elementary course of study. *School life*, 9: 184, April 1924.

Points out a theoretically possible saving of \$100,000,000 by elimination of the eighth grade from the elementary organization.

JONES, H. G. Possible economies through control of business administration. *School and society*, 19: 297-300, March 1924.

KESSEY, VIELLING. The cost of cheap educational programs. California schools, *State department of educa-*

tion, Sacramento, Calif. Vol. 3, no. 4, April 1932. p. 109-17.

Very helpful and thought-provoking analysis in chart form giving for each large phase of school work the signs of an adequate educational program, of dangerous and uneconomical retrenchments, and of the results of the latter.

KING, C. L. Competency and economy in public expenditures. *Annals of American Academy*, 113:1-366, May 1924.

LAMBERT, A. C. Instruction and plant operation as constant costs. *American school board journal*, 80:42, April 1930.

Shows, by means of tables, the percentages of school costs devoted to instruction and plant operation. Points out the distinct tendency of these two major items of school cost to take constant proportions of the total cost.

LAUGHLIN, E. V. Financing the medium-sized school system. *American school board journal*, 70:36, March 1925.

Describes the budgetary distribution of a medium-sized school and analyzes five means of avoiding wastes. Recommends a carefully compiled inventory of school needs, a thoughtful consideration of how to meet these needs, an efficient purchasing scheme, effective supervision of all purchases, and a scientific anticipation of future needs as economy measures.

LOVEJOY, PHILIP C. Diverse economies that mean money to the system. *Nation's schools*, 8:82, 84, August 1931.

Considers the issues of sick leave and health insurance in relation to possible economies, scientific purchase of equipment and improved methods of reporting personal expense accounts.

Miscellaneous economies. *Nation's schools*, 6:90, October 1930.

Lists with explanatory description, six money-saving methods found in Hamtramck schools.

Saving money in the business of public education. *Nation's schools*, 7:98, February 1931.

Suggests three specific steps toward saving money as follows: (1) Study adopted policies of the board of education, initiate steps so board of education will place on record such a policy if it doesn't exist; (2) ascertain that all departments of the system are operating in accordance with these policies; (3) make an analysis chart showing how money is being spent. Cites difference between educational and financial economy but that educational economy in the long run would result in financial economy and warns school officials not to be short-sighted by effecting economies which will later lead to far greater expenditures.

Saving money by the concentration of service. *Nation's schools*, 7:75-82, April 1931.

This second article in a series on this general subject deals with saving money

by concentration of service through re-adjustment of teachers as resignations occur. Considers several methods of effecting economies.

Saving money by means of new techniques. *Nation's schools*, 7:74-76, May 1931.

General discussion of reckless spending and techniques for saving money in school administration. Suggests larger pupil-teacher ratio with educational internes as helpers and cites economic efforts of five city superintendents.

MCCLELLAN, EDWARD EARL. Possible economies in a county administration of schools. M. A. thesis. 1930. *Ohio State University*.

MCCLELLAN, J. W. Bargain hunting and price cutting. *School executives magazine*, 50:427-28, May 1931.

Emphasizes the facts that the board of education is not a bargain hunter, that the administration is not a price cutter when administrative service is concerned.

MILLER, H. J. and STUDEBAKER, J. W. The problem of reducing school costs. Mr. Miller's paper in *American school board journal*, 83:33-34, December 1931. 6 p. Superintendent Studebaker's comments, mimeo., *Des Moines, Iowa, public schools*, January 9, 1932. 14 p.

A representative of the Minneapolis taxpayers' association gives an unusually clear statement of the economies in school expenditure advocated by outsiders. Superintendent Studebaker makes an exceptionally good reply from the standpoint of a superintendent of schools, using Des Moines data for illustrations.

MOEHLMAN, ARTHUR B. Finance organization. In his *Public-school finance*. New York, N. Y., *Rand McNally*, 1927. p. 32-51.

Sets up a group of 12 diagrams to show essentials of the organization for the management of school supplies and equipment.

MORGAN, W. E. Promoting educational efficiency. *Law digest*, 7:27, January 1929.

MORRISON, HENRY C. What shall we support? In his *The management of the school money*. Chicago, Ill., *University of Chicago press*, 1932. p. 175-90.

A stimulating "plea for retrenchment in needless and uneconomical expenditure."

NATIONAL EDUCATION ASSOCIATION. DEPARTMENT OF SUPERINTENDENCE OFFICIAL REPORT. *Report of the Committee on school costs*. Washington, D. C., February 1932. 289-319.

Summaries of the financial emergency, as a whole and by States. Suggestions on possible economies, and references on specific economies. Discusses State aid and profitable tax revisions.

— **RESEARCH DIVISION.** Can the states afford to educate their children? *Washington, D. C., National education association, 1929.* (Research bulletin, vol. 7, no. 1, January 1929)

A study of the wealth, income, and school support in individual States. Statistical tables give the financial data, expenditures, investments, and income by States, 1926. Selected annotated bibliographies.

— Can the Nation afford to educate its children? *Washington, D. C., National education association, 1928.* p. 259-92. (Research bulletin, vol. 6, no. 5, November 1928)

Cites the facts with financial tables and charts to prove that educational expenditure in the past and now can be justified in the light of education's (1) importance to the general welfare, (2) the Nation's ability to pay, and (3) the current policy of wise, constructive economy in public outlay.

NORTON, J. K. School finance and education articulation. In National education association. Department of superintendence. Official report, 1931. *Washington, D. C., National education association, 1931.* p. 112-16.

Discusses a poorly planned system of finance resulting in educational inarticulation. Conflicts existing between the higher institutions and the elementary secondary level, teachers colleges and universities, State colleges and State universities and between various subject-matter fields hinder an articulated plan. Suggests three remedies: common agencies of control, State budgeting, and informal methods.

O'SHEA, M. V. Can we save in education without harming the schools? *Nation's schools, 9: 33-34, February 1932.*

If economies must be made certain phases of the educational program, including length of school term must not be curtailed, lest we revert to practices of earlier decades and nullify the work of many years past.

Reasonable economy in school administration. *American educational digest, 44: 566, August 1925.*

Reducing economic waste of poor teaching. *American educational digest, 44: 11, September 1924.*

The economic waste resulting from poor teaching, substantiated by statements from various business men. The related lines of work and practical ways through which essential training for educational leadership may be given are outlined.

REEDER, W. G. Crisis confronts the schools. *Educational research bulletin, 10: 271-72, May 13, 1931.*

Editorial discussing economic conditions of 1931. Upholds reduction in ex-

penditures in education when achieved without crippling schools. Suggests that schools eliminate all waste; sell themselves to the public through larger advertising and public relations campaigns; keep older students in school, thereby reducing unemployment among adult population.

— **and HOLMSTEDT, R. W.** Financial economies in business management of schools. In Review of educational research. Finance and business administration number, vol. II, no. 2, April 1932. p. 139-47, 174-80. American education research association, Department of. *National education association, Washington, D. C.*

Running review and bibliography of researches in this field, stressing those from 1923 to the fall of 1931.

ROUDEBUSH, G. E. Some practical economies in school administration. *American school board journal, 78: 41-42, June 1929.*

Saving by losing. *School and community, 15: 433-35, October 1929.*

SHEPPER, W. E. Possible economies in school administration. *American school board journal, 84: 30-31, 90, February 1932.*

Analyzes five types of financial activities for possible economies that have little effect on the quality and quantity of education provided. A comprehensive check list is compiled to assist school administrators in detecting possible economies.

SHEPHERD, H. P. Economy through efficient business management. *American school board journal, 80: 70, February 1930.*

SMART, T. J. How better schools for less money may be made available for a Kansas community. *Kansas university bulletin of education, 3: 3-19, February 1931.*

Presents a federation plan of organization and method of financing education jointly for communities in Kansas, thereby reducing cost, based on financial expenditures of the school districts involved, and at the same time securing the benefit of larger and better schools. This plan may be applied elsewhere.

STANSON, PAUL C. Effecting financial economies. In Ohio state educational conference, sixth annual proceedings, 1928. (Ohio State university bulletin, vol. 31, no. 2, p. 98-99.)

Outlines the savings in the school budget which can be made by enlarging size of classes, organizing the elementary school into seven instead of eight grades, and in building programs.

SUEZALLO, HENRY. A dollar's worth of education. *The tax digest, November, 1926, pp. 149-151, California taxpayers' association, Los Angeles.*

A brilliant summary of professional efforts toward efficiency and economy in

nontechnical language. Doctor Suzzallo points out the value of organizations like California taxpayers' association and condemns short-sighted economy by uninformed groups.

TRENHAM, N. BRADFORD. School Economy and Efficiency Keynotes at Tahoe. *The Tax Digest*, December, 1928, pp. 191-92, California taxpayers' association, Los Angeles.

A résumé of the 1926 Annual Superintendents Convention at Lake Tahoe. Efficiency and economy were the keynotes of the Convention although the depression was still three years in the future.

— What is expected of educational research. *Tax digest*, 8:21, January 1930.

WELLS, D. N. How Pueblo schools reduce school book costs through a book-repair department. *American school board journal*, 77:46, 154, July 1928.

An account of a school book bindery which binds books at an average cost of 26 cents, a saving of 24 cents over commercial rates.

EFFICIENCY MEASURES, FINANCE

For efficiency measures of any item, e. g. Budgets, see that head

See also Economies; Value of Education; Waste

BUCKINGHAM, B. R. Securing support on the basis of value. *Educational research bulletin, Ohio State university*, 3:166-67, April 16, 1924.

HEY, SPURLEY. Value for money in education. *Manchester, Thomas Hope, Educational publisher*, 1925. 32 p.

Attempts to account for the money value of education in England. Analyzes statistically expenditures, and discusses the problem under the following headings: Traditional misgivings, the expenditure for which value is demanded, the cost of housing pupils, the cost of physical and mental defectives, medical inspection and treatment, free meals, cost of administration, teachers' salaries, maturity's debt to youth, the cash value of health, the business man's demand, and incalculable returns.

JONES, T. N. Financing an efficient school system. *Texas outlook*, 12:9-11, July 1928.

KERR, E. S. Improvement of schools through more adequate finances. *Journal of the Ohio State teachers association*, 3:26, July 1925.

LEWIS, E. E. Better means of financing public education. *School executives magazine*, 48:534-36, 566-67, August 1929.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Estimating school efficiency. *Washington, D. C., National education association, 1932.* (Research bulletin, May 1932.)

School costs and results. *Journal of education*, 105:207, February 21, 1927.

STRAYER, GEORGE D. Financing education on a scientific basis. *School and society*, 21:243-47, February 28, 1925.

Discusses interest, depreciation charges, three methods for predicting costs, determination of economies which can be effected without decreasing school efficiency, equalization, measurement of costs involved in minimum programs, uniform local taxes, the distribution of State aid, and the obligation of the Nation to support education as phases of scientific educational finance.

ELEMENTARY SCHOOLS

ACCOUNTING

RICH, L. H. Accounting for elementary school funds. In *National education association, Department of elementary school principals, Ninth yearbook, 1930. Washington, D. C., National education association, 1930.* p. 374-75.

This article presents a simple, comprehensive, nontechnical method for handling the recording of receipts and disbursements of school funds in each individual elementary school in Detroit. Each school is furnished with an ordinary bound cash book, with printed directions including an illustration. The central office exercises supervision over expenditures for equipment only. The practical value of the system is that it relieves the principals and other administrative officers of criticism or dishonesty.

AID

See State Aid, Elementary Schools

COSTS

HUFFAKER, C. L. Neglected aspects of common school costs in Oregon. *Eugene, Oreg. University of Oregon, 1930.* 67 p. (University of Oregon publication, vol. 2, no. 3, April 1930.)

MARION, J. A. The administration and financing of our elementary system of education. *Western school journal*, 24:341-43, November 1929.

MINNESOTA. DEPARTMENT OF EDUCATION. STATISTICAL DIVISION. A study of elementary and high-school costs. *St. Paul, Minn., Department of education, 1930.* 58 p.

Per capita costs of elementary education. *Elementary school journal*, 30: 487-88, March 1930.

A brief statistical résumé of two statements showing per capita costs of elementary education in England for 1928-29, and in the United States for 1927-28. In England the costs are taken from groups listed under London, other counties, county boroughs, urban districts, boroughs, England, and Wales. In the United States, from cities listed in three groups.

STROOPS, R. O. Elementary school costs in the State of New York. *New York, N. Y., Macmillan co.*, 1924. 123 p. (Vol. II of Education finance inquiry.)

COSTS, FOREIGN

The costs of elementary education in various countries. *Elementary school journal*, 28: 83-85, October 1927.

Calls attention to the fact that the educational programs and the organization of the various nations are by no means comparable. Presents some per pupil cost statistics for England and Wales, France, Prussia, Norway, Sweden, Denmark, Holland, Italy, Czechoslovakia, Belgium, Canada, Australia, New Zealand, and South Africa.

EQUALIZATION

COUNTY

California. SUZZALO, HENRY. Education specialist favors county unit plan; only way to bring about equal educational opportunity in California. *Tax digest*, 7: 76, March 1929.

COOK, K. M. Progress of rural education, 1925-26. *Washington, U. S. Government printing office*, 1927. p. 13-19. (U. S. Office of education. Bulletin, 1927, no. 15.)

Deals with equalization and reward of effort, together with some special progress reports. Includes a discussion of Work's article on the importance of rewarding local school effort. Concludes that it is better to secure and maintain an attitude of growth toward education than to sacrifice it for equality of educational opportunities. Lists States reporting definite revisions of the laws concerning State school funds or the securing of appropriations.

Frost, N. County school survey: An instrument for the equalizing of educational opportunities. *Peabody journal of education*, 6: 261-67, March 1929.

Analyzes the inequalities in educational opportunities within a county and the use of a county school survey to locate and define those inequalities, to make plans for their correction and to aid in the execution of the plans.

Indiana. SHERWOOD, HENRY N. Equality of educational opportunity. *Indianapolis, Ind., Department of public instruction*, 1928. p. 1-10. (Department of public instruction. Bulletin, no. 82.)

Analyzes various inequalities in the educational system, finance, attendance, instruction, supervision, and taxes. Suggests remedies through making the county the unit of taxation, enlarging attendance district, giving trained and able teachers to the county and small city schools, inaugurating a more effective method of supervision in the rural districts, reducing overhead expenses in township and by using the county as a unit in the purchasing of school supplies.

Ohio. REEDER, WARD G. and WHITMER, J. W. The county tax as an equalizer of educational opportunity in Ohio. *Educational research bulletin* (Ohio State university), 4: 177-82, April 29, 1925.

Texas. GREGG, WALLACE. Relative efficiencies of small and large schools. *Texas outlook*, 13: 25-26, September 1929.

Discusses results of a school survey of Wise county, Tex. The findings indicate that much more efficient work is being done in large urban schools than in small rural schools. Attributes the difference largely to the attraction urban school salaries have for good teachers.

MARBS, S. M. N. Equality of educational opportunity from the standpoint of stronger county organization—administration and supervision of schools. *Texas school journal*, 41: 25-28, January 1924.

Utah. CLARK, LOUISE. The county unit of school administration equalizes educational opportunity in Utah. *Tax digest*, 6: 101-3, March 1928.

FOREIGN

Canada. Equal educational opportunity for the children of Ontario. *Canadian school board journal*, 7: 14, July-August, 1928.

TROTH, DENNIS C. History of State aid for education in the old world. In *his* History and development of common school legislation in Washington. *Seattle, Wash., University of Washington press*, 1927. p. 178-83.

GENERAL

See also State Aid, general; State Support; Taxation, Equalization

Adequate financing. The outlook for rural education. *Research bulletin of the National education association*, 9: 245-46, September 1931.

Facts given to show the inadequacies and inequalities of rural school finance

- in the various States, with brief recommendations for improvement. Annotated bibliography of eight references.
- BIZZELL, W. B.** Democracy in education. *Texas outlook*, 13: 12-13, 26, February 1929.
- BOYNTON, FRANK D.** Are we equalizing opportunities? *Journal of education*, 107: 216, 241-42, February 20, 1928.
- BURNHAM, ENEST.** Equalizing rural and urban education facilities. *Nation's schools*, 8: 76-78, 80, July 1931.
Points out cases of unequal distribution of funds and deplors the apparent lack of interest in financing rural education. Concludes that proper facilities for rural education demand State equalization funds adequate to the need, distributed where the need is, without reference to the promotion of special features in either organization or curriculum.
- CARPENTER, W. W.** The rights and privileges of school children. *Peabody journal of education*, 6: 81-95, September 1928.
- CARR, W. G.** Equalization as a State function in education, public health, and welfare. *Social service review*, 4: 537-42, December 1930.
- DAVIS, H. H.** Educational equalization. *Educational research bulletin*, 9: 181-85, April 1930.
Discusses financial administration by the Department of Education and the Board of Control, of a partnership business of education, between the State and the local community to secure the maximum amount of education for every dollar expended and to incur only those obligations from available funds which can be paid during a current biennium. A statement of local tax money is required and combined with the State funds to form the basic revenue operating the State aid schools.
- DAWSON, HOWARD A.** Consolidation one great equalizer. *Journal of Arkansas education*, 7: 21-23, December 1928.
- Determining the purpose of a State distributive fund. *Illinois teacher*, 15: 79-83, January 1927.
- Equalization or stimulation. *Educational press bulletin*, 211: 1-2, January 1927.
- GAUMSITZ, W. H.** Availability of public-school education in rural communities. *Washington, U. S. Government printing office*, 1931. 53 p. (U. S. Office of education. Bulletin, 1930, no. 34.)
Estimates the availability of schools of the proper grade level to rural children. Studies the distances children of different ages must travel to reach such schools, climatic and topographical factors conditioning these distances, and the quantity and quality of the educational program of such schools in 22 counties in California, Colorado, Iowa, Kentucky, and Wisconsin.
- GRAVES, FRANK P.** Some reflections upon State educational finance. *New York State education*, 12: 324-27, January 1925.
Analyzes the causes for raising educational costs and outlines the need for an equalization fund which will relieve some rural districts of their economic strain and provide them with an acceptable program of education. Article has historical interest.
- HERON, ALEXANDER R.** Equalization of educational opportunity needed. *Tax digest*, 6: 352-53, October 1928.
- HOLLISTER, H. A.** Equal opportunity for all in secondary education. In Illinois University. High-school conference. Proceedings, 1924. p. 9-14.
Defines equal opportunity by a discussion of pupil classification, prerequisites of secondary education, educational objectives, need for differentiated curricula, the physical plant, the teachers, basic principles, and the accessibility of the schools. Includes an analysis of the relation of the accessibility to taxation.
- HOWARD, GEORGE.** Equalizing opportunities. *Journal of education*, 107: 388-89, March 26, 1928.
- KELLOGG, ALBERT B.** Equalizing special advantages for smaller schools—abstract. In National education association, department of superintendence official report, 1932. Washington, D. C., February 1932. p. 212-13.
- LAWLER, EUGENE S.** Technique for computing the new aid required for State equalization program. Dissertation completed at Teachers college, Columbia university, New York city, in press with Bureau of publications there.
- LEE, S. H.** Unequal chance, suggested remedy. *Bulletin (N. A. T. C. S.)*, 9: 16-17, November 1928.
- LINDSAY, E. E.** Equality of educational opportunity. In his Problems in school administration. New York, N. Y., Macmillan co., 1928. p. 460-510.
Discusses educational opportunity with respect to democracy and education, measures of economic ability to support public schools, standards and indices of ability, total actual ability, assessment of ability under taxation and the significance of assessment ratios, importance of true measures of ability, mileages, measures, standards and indices of effort, and the program in the support of public schools.
- MORGAN, BARTON.** Better schools for farm children. *Journal of education*, 110: 110-14, July 29, 1929.

MORRISON, H. C. Equalization. In his School revenue. *Chicago, Ill., University of Chicago press, 1930.* p. 193-218.

Discusses the modified use of taxing power, the determination of educational burdens, the administration of equalization funds, and the enlargement of school districts as processes of educational equalization. Examines the financial implications of county units and districts within the county, and defines the ultimate social purpose of equalization. Contends that there must be more effective State educational organization before the Federal Government can be educationally effective.

MOST, PAUL R. Equality of educational opportunity and the classroom teacher. In his *The individual pupil.* New York, N. Y., American book co., 1928. p. 17-25.

— Financing of American level schools. *Illinois teacher, 19:* 157, January 1931.

Deals with the reorganization of the financing of State and local government in order that the principles of equalization of educational opportunity may be put into practice.

— Financing secondary education. In Department of secondary school principals. Proceedings of the fourteenth annual meeting, 1930. *Cicero, Ill., Department of secondary school principals, 1930.* p. 53-60. (Bulletin, 1930, no. 30.)

Analyzes plans for the equalization of educational opportunity in secondary schools in an attempt both to solve the problem and relieve the present overburdened taxpayer.

— State support for public schools. *New York, N. Y., Teachers college, Columbia university, 1926.* 104 p. (School administration series.)

Sets up criteria for adequate system of State support, devises a measure of local educational need and ability to support education and outlines a plan for equalizing the burden of support among the various localities of a State.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Differences in ability of local communities to support schools. *Washington, D. C., National education association, 1927.* p. 31. (Research bulletin, vol. 5, no. 1, January 1927.)

— Economic ability and effort being made to support schools by States, 1924. *Washington, D. C., National education association, 1927.* p. 27. (Research bulletin, vol. 5, no. 1, January 1927.)

— The outlook for rural education. *Washington, D. C., National education association, 1931.*

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Facts to show the inadequacies and inequalities of rural school finance in the various States, with brief recommendations for improvement and annotated bibliography of eight references.

NEWLUN, CHESTER. Proscription of educational opportunity. *School executives magazine, 48:* 267-68, February 1929.

Discusses the charges that education of any kind or every kind for everybody is ridiculous and impossible. Examines briefly various contentions and predicts that future public financial support of education will hinge upon the answer educators can give to the questions: "Shall American educational opportunity be restricted or proscribed and if so, how and by whom?" Analyzes the present program proscribed by static tradition.

PITTENGER, B. F. Apportioning the benefits. In his *An introduction to public school finance.* New York, N. Y., Houghton Mifflin co., 1925. p. 296-331.

— Educational inequalities. In his *An introduction to public school finance.* New York, N. Y., Houghton Mifflin co., 1925. p. 237-67.

PITTMAN, M. S. Equalizing educational opportunity for rural children. *Michigan education journal, 4:* 94-96, 127-28, October 1926.

POTTER, MILTON C. What city schools can do to aid rural schools. *Nation's schools, 2:* 60-71, August 1928.

RUSSELL, WILLIAM F. School administration and conflicting American ideals. *Colorado school journal, 45:* 7-12, September 1929.

Traces the influence of the political theory of equality upon the history of American education, especially upon the development of county, State, and Federal financial provisions for the equalization of educational opportunity.

SHERWOOD, HENRY N. Equal educational opportunities. *Journal of the National education association, 15:* 173-75, June 1926.

— Equality of educational opportunity. *State department of public instruction. Indianapolis, Ind., 1926.* (Bulletin no. 82.)

STRAYER, GEORGE D. A program for the realization of the ideal of equality of opportunity in education. *Journal of Arkansas education, 9:* 3-4, 31, December 1930.

Describes an educational program which will provide an equal opportunity for children of all classes and of all abilities, and outlines a State organization which will insure the adequate administration of that program.

STRAYER, GEORGE D. Equality of opportunity. *Texas outlook*, 15: 15-16, March 1931.

Appeals for the reorganization and expansion of administrative units in order to provide an educational opportunity for each individual in keeping with his or her intelligence and abilities. Finance is not mentioned.

— Redefinition of the concept of equality of opportunity in education. In National education association. Proceedings, 1930. Washington, D. C. National education association, 1930. p. 78-82.

Redefines the concept of equality of opportunity in education and traces the development of the equalization movement into many phases of our educational activities.

SWIFT, FLETCHER HARPER. Complete State support wisest way to finance public schools. *School life*, 12: 81-82, January 1927.

Studies existing methods of State educational support in the United States. Includes a discussion of the programs of complete State support found in Australia, the methods for paying teachers' salaries entirely from State funds in France and Germany, and recommends complete State support as an ultimate goal for American educational finance.

— State equalization funds. In his Federal or State aid policies in school finance in the United States. New York, N. Y., Ginn and co., 1931. p. 249-300.

The need, extent, and status of equalization funds for schools in the United States and the various methods used in apportioning such funds in the several States are examined. Discusses complete State support, sources of equalization funds, methods and bases for determining minimum programs, bases of eligibility for equalization grants, and the equalization plans of Ohio, Texas, Florida, North Carolina, South Carolina, Wisconsin, West Virginia, Maryland, Arkansas, Alabama, Georgia, and New York.

TENNANT, J. L. Improving high-school opportunities for farm boys and girls. *Journal of rural education*, 5: 242-52, January-February 1926.

U. S. OFFICE OF EDUCATION. Equalization funds and bases of distribution to counties and schools. In A manual of educational legislation. Washington, U. S. Government printing office, 1928. p. 38-40. (U. S. Office of education. Bulletin, 1928. no. 22.)

— Equalization funds. Washington, U. S. Government printing office, 1930. (U. S. Office of education. Circular, no. 5, February 1930.)

Contains abstracts of addresses given at the December, 1929, meeting of the National Council of State Superintendents and Commissioners of Education in Washington by representatives of Wisconsin,

Louisiana, New York, and Connecticut concerning the status of equalization of educational opportunity plans in those States. Outlines programs for the States listed above and notes the traits of present programs.

WARD, DAVID A. An equal chance for every child. *Journal of education*, 109: 639-40, June 10, 1929.

WILLETT, G. W. Some neglected factors in equalization programs. *American school board journal*, 73: 51, 167, September 1926.

Discusses the policy of basing the apportionment of State school funds upon the local maintenance of a given program, the impossibility of certain suggested severance taxes, and the consideration of local standards and costs of living as elements of equalization programs which must be more accurately accounted for to fully equalize educational opportunities.

WINTERS, THOMAS H. An evaluation of typical attempts to equalize educational opportunity by state aid. Doctor's thesis, 1930. Ohio state university, Columbus. 836 p. ms.

This study involved the definition of the problem of equalization, brief examination of equalization in 48 States, study of entire school financial system in 13 States, evaluation of results, etc. Findings: No State has taken into consideration all of the factors necessary for complete equalization; complete equalization is hardly possible without leveling some subdivisions downward; certain principles must be followed to proceed in the right direction. These are set up.

WOFFORD, K. V. Equalizing opportunity. *Journal of education*, 110: 493, December 1929.

Presents the educational and social philosophy underlying equalization of educational opportunity, and states that equalization is primarily a matter of finance.

PROGRAMS, MINIMUM

HAYDEN, WARREN S. What is the public's responsibility for public education? In Ohio State educational conference. Eighth annual proceedings, 1928. p. 104-6. (Ohio State university bulletin, vol. 33, no. 3.)

Maryland. STATE DEPARTMENT OF EDUCATION. Equalizing educational opportunities in Maryland through a minimum program and an equalization fund. Baltimore, Md., State department of education, 1930. 79 p. Maryland school bulletin, vol. 12, no. 1, September 1930.

Discusses principles which make equalization of educational opportunities necessary and possible. Explains the bases for distributing State school funds in Maryland; the general requirements of a minimum current expense program; the effects of the Maryland equalization program on the teaching staff, attendance,

enrollment, expenditures, and county tax burdens; the relation of school needs to State's assessed wealth; the relation between State public school tax and State aid to schools; the State public school budget; sources of State school funds; and some general problems connected with taxation.

PICKELL, FRANK G. What education should be publicly financed? *Colorado school journal*, 44: 28, 30, June 1929.

SCHMIDT, A. W. The development of a State minimum educational program. A doctor's dissertation in press at Bureau of publications, Teachers college, Columbia university, April 1932.

Discusses what mandatory legislation on the minimum educational program the State should enact. Gives present status of such legislation, goes deeply into the division in control between State and locality, treats standards for a minimum program, and treats troublesome administrative problems involved.

What education should be publicly financed? *Western school journal*, 24: 403-7, December 1929.

STATES, INDIVIDUAL

See also State Aid, State's Individual

Alabama. COWART, R. W. Equalizing educational opportunity. *Alabama school journal*, 44: 3-4, February 1927.

STATE DEPARTMENT OF EDUCATION. Apportionment and distribution of Alabama's equalization fund. *Montgomery, Ala., State board of education*, 1930. 16 p.

Considers in detail the factors which caused the differences in the amounts of State aid received by Alabama counties which participated in the apportionment of the State's equalization fund during 1927-29. Presents reasons for the non-participation of more than one-third of the counties in the distribution of the equalization fund.

STATE DEPARTMENT OF EDUCATION. Some facts relating to elementary and high-school education in Alabama. *Montgomery, Ala., State department of education*, 1924. 30 p.

Arkansas. DAWSON, HOWARD A. Financial support of education in Arkansas. *Little Rock, Ark., State department of education*, 1928. 75 p.

A statistical study of the financial support of education in Arkansas from 1923 to 1927. Proposes using the county rather than the district as the unit for school taxation. Under this plan, "sufficient funds will be secured, if administered properly on the basis of unit costs of elementary and high-school pupils in attendance, equalization of educational opportunity will be practically certain.

and LITTLE, HARRY A. Financial and administrative needs of public schools of Arkansas. Vol. I. *Little Rock, Ark., State department of public instruction*, November 1930. 100 p.

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Oklahoma. CURRY, GUY. The \$15 amendment; equalizing the burdens of taxation. *Oklahoma teacher, 6:5, 30-31,* April 1925.

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OREGON STATE TEACHERS ASSOCIATION. Adequate revenue and the equalization of taxation for education in Oregon. *Portland, Oreg., State teachers association, 1928.* 78 p.

A statistical study of school revenue and the equalization of taxation for education in Oregon, 1923-1926, prepared by a committee of the Oregon State Teachers Association. The study has a four-fold purpose: To analyze the constitutional and statutory provisions for the support of public education; to present and interpret data showing inequalities in taxation and distribution; to present a plan of distribution; and to apply the proposed plan to the Oregon situation.

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— Report of committee to study the present plan of financing the public schools and related matters. *Harrisburg, Pa., Department of public instruction, 1929.* 263 p.

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SWIFT, F. H. and ZIMMERMAN, B. L. State school taxes and school funds and their apportionment. *Washington, U. S. Government printing office, 1928.* 431 p. (U. S. Office of education. Bulletin, 1928, no. 29.)

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— VANCE, JOHN Q. Inequalities in educational opportunities in the white elementary schools in Tennessee. *Elementary school journal, 31: 767-78, June 1931.*

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— Let us not grow weary; a suggestion relative to a difficult problem. *Texas outlook, 11: 24, November 1927.*

— BUNTING, ROBERT L. Equality of educational opportunity. *Texas outlook, 12: 17-18, 65-66, June 1928.*

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— MOELHANNON, J. C. The opportunity for equality in the district political unit in Texas. *Texas outlook, 11: 17-18, January 1927.*

— ROGERS, W. J. Larger units of school administration to eliminate inequalities. *Texas outlook, 14: 66, February 1930.*

— SWIFT, F. H. Sound methods of school finance as a means of equalizing educational opportunity in Texas. *Texas outlook, 8: 8-12, February 1924.*

Utah. CLARK, LOUISE. County unit of school administration equalizes educational opportunity in Utah. *The*

tax digest, March 1928, p. 101; California taxpayers' association, Los Angeles.

A report of two weeks' field work studying the operation of the county unit system in Utah.

Utah. JENSEN, C. N. A study of inequalities in educational opportunities in the State of Utah. *Salt Lake City, Utah, State department of public instruction*, 1930. 36 p. See p. 33.

— Preliminary statement regarding a plan for equalization of educational opportunities in Utah. *Salt Lake City, Utah, State superintendent of education*, 1930. 11 p.

— SWIFT, F. H. Survey of education in Utah. *Washington, U. S. Government printing office*, 1926. p. 418-55. (U. S. Office of education. Bulletin, 1926, no. 18.)

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— HART, H. School funds and equalization. *Virginia journal of education*, 23: 107-9, November 1929.

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— Minutes and official proceedings of the State board of equalization—1930. *Olympia, Wash., State department of education*, 1930.

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— State school equalization fund. *Olympia, Wash., State department of education*, 1926. 6 p.

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— HUNT, E. A. Equalize public education. *West Virginia school journal*, 56: 141-42, January 1928.

— MCGRAW, S. L. West Virginia's greatest educational need. *West Virginia school journal*, 57: 211-12, March 1929.

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— Statement of the effects of the proposed relief and equalization program for the elementary and high schools of West Virginia. *Charleston, W. Va., State department of education*, 1930.

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— The financial situation in Wisconsin high-school districts. *Madison, Wis., Department of public instruction*, 1926. 87 p.

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— How the equalization law affects our school finance. *Racine-Kenosha rural normal school bulletin*, 10: 5, January 1, 1929.

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An analysis of the conditions of wealth, taxation, and State aid in the counties and school districts of Wyoming and the application of equalization plans which will result in greater equality of opportunity and school support. Proposes a minimum program and sets up several plans for combined State and local support.

— Financing public education in Wyoming. *Cheyenne, Wyo., State teachers association*, 1930. 122 p.

Analyses the present system of school support in Wyoming by investigating inequalities in the present system of support, sources of revenue, and the cost of education. Defines a minimum program and outlines a plan for providing greater equality of educational opportunity in the State. Includes methods of measuring the cost of living of teachers and the need for transportation of isolated school children in Wyoming.

EQUIPMENT

BUDGET

See also other subheads of Equipment

GANDERS, HARRY S. Budgeting equipment for a new building. *American school board journal*, 79:44, July 1929.

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KNOX, ROSE. Budget system. In her *School activities and equipment*. New York, N. Y., Houghton Mifflin co., 1927. Chapter IX. p. 316.

Dogmatic statement of time and method for drafting the budget. Discusses cooperative ownership and cooperative buying as methods of economy and gives 10 rules for buying school equipment.

LOOMIS, A. K. The technique of estimating school equipment costs. *New York, N. Y., Teachers college, Columbia university*, 1926. 112 p. (Teachers college, Columbia university. Contributions to education, no. 208.)

From an analysis of school furniture price lists, devises a technique for estimating school equipment costs that purports to be reliable, adequate, flexible, and simple. Gives and explains a device for measuring change in price level from year to year in the form of an index based on 1925 prices.

COSTS

BACKUS, ALLEN D. Maintaining shop equipment. *Industrial education magazine*, 29:366-68, April 1928.

Describes the method used in Newark, N. J., for accounting for and replacing school shop equipment.

KNOX, ROSE B. School activities and equipment. *Boston, Mass., Houghton Mifflin co.*, 1927. 386 p.

Complete lists with descriptions, prices, and vendors so that teachers may use them "Whether their curricula are organized on a subject-matter basis or on an activity basis." Lists six methods of obtaining money for school needs, and under "How to Spend Money," discusses the budget system, cooperative ownership, and cooperative buying, and gives 10 rules for buying school supplies and equipment.

LOOMIS, A. K. School equipment costs: A method of estimating. *Teachers college Bureau of publications, Teachers college, Columbia university, New York City*. 1926. 259 p.

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ANDERSON, HOMER W. Equipping the classroom for the pupils' needs. *Nation's schools*, 1:13-20, January 1928.

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BENNET, HENRY EASTMAN. The buying of school equipment. *American school board journal*, 74:90-91, 140, January 1927.

Discusses as economy measures scientific selection of all equipment, value of substantial quality, wisdom of splitting awards, budgetary provisions and advantages of early buying, purchasing upon the advice of the superintendent, and buying in an open market.

DONNELLY, ALICE M. Some economies which have been effected in the administration of home economies in the public schools of Ohio. *Educational research bulletin* (Ohio State university), 4:272-73, September 23, 1925.

Lists 25 economies effected in courses in home economics in various Ohio city schools.

ENGELHARDT, N. L. Studies in school equipment. *School executives magazine*, 50:428, May 1931.

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HALLER, GEORGE F. Selection and purchase of equipment for trade and industrial classes. *Berkeley, Calif., University of California*. 1927. 35 p. (Division of vocational education. Bulletin no. 22. Trade and industrial series no. 7, June 1927.)

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WARING, RALPH G. The maintenance and reconditioning of school equipment. *American school board journal*, 73:69, July 1926.

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EVENING SCHOOLS

[Statistics appear in the City Statistics and State Statistics bulletins of the United States Office of education. See these heads]

DE GALAN, F. S. Philosophy of fees. National education association proceedings, 1929. p. 287-89.

NATIONAL EDUCATION ASSOCIATION. Enrollment and cost instruction in public night schools, 1927-28, in thirty-one States reporting. In Investing in public education, Vol. VIII, no. 4. Washington, D. C. National education association, September 1930, p. 201-2.

A brief and concise article stating the extent and number of night schools in the United States and acclaiming their cultural value. A statistical table gives the enrollment and cost of instruction in public night schools of 31 States 1927-28.

PATLOW, J. R. Promoting evening classes. *Industrial arts magazine*. 18: 365-70, October 1929.

EXPENDITURES

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EXTRACURRICULAR ACTIVITIES

ACCOUNTING

See also Accounting, School, General

BROWN, V. I. Handling the money from student activities. *American school board journal*, 75: 122, December 1927.

COLEMAN, R. W. An accounting system for high-school activity funds. *American school board journal*, 74: 70, 143, February 1927.

ENGELHART, N. L. and GRILL, G. W. Internal accounting for extracurricular activities in public schools. *Teachers college record*, 27: 753, May 1925.

MEYER, H. D. A handbook of extracurricular activities in high school. *New York, N. Y., A. S. Barnes and co.*, 1926. p. 210-11.

MOEHLMAN, ARTHUR B. Internal accounting. In *His Public-school finance*. *New York, N. Y., Rand McNally*, 1927. p. 443-500.

Gives the rules and regulations carried out in Detroit for internal accounting. This sort of plan protects everyone involved from insinuations and inspires confidence of professional and public interests. Gives such forms as cash receipts, disbursements, total accounts, ledger forms, requisitions and purchase order forms, as well as many more.

SCOTT, M. J. and HILL, C. W. Financial accounting in student activities. *School review*, 32: 442-44, June 1924.

WILDS, E. H. Extracurricular activities. *New York, N. Y., Century co.*, 1926. p. 204-14.

BUDGET

GREEN, W. H. The activities budget. *Junior-senior high school clearing house*, 4: 284-90, January 1930.

BUILDINGS

GLUECK, ELEANOR T. Extended use of school buildings. *Washington, U. S. Government printing office*, 1927. 80 p. (U. S. Office of education. Bulletin, 1927, no. 5.)

Data on sources of support by States.

REED, CARROLL R. Community use of school buildings. In National education association. Department of superintendence. Ninth yearbook. *Washington, D. C., National education association*, 1931. p. 197-98.

Shows lines of activity carried on in 920 school centers, the problems involved, the policy of Minneapolis schools in relation to community use, the types of gatherings permitted, and which types are charged for use of the school plant.

FINANCE PLANS

BATESOLE, GLEN L. A system of financial controls for extracurricular activities. Master's thesis, 1930. *University of Wisconsin, School of education, Madison, Wis.*

BOOTH, J. M. Student fee system in Northwestern high schools. *American school board journal*, 78: 68, March 1929.

Portrays the problem of financing extracurricular activities in high schools, as shown by the results of a questionnaire mailed to the principals of 300 selected high schools of Washington, Oregon, Idaho, and Montana, in 1929. The student fee system offers possibilities for facilitating extracurricular finance and the tends to increase. Many problems in its operation can be solved only in the light of local conditions.

CAREY, RAYMOND B. The administration of the finances of extracurricular activities. Master's thesis, 1930. *University of Nebraska, Lincoln, Nebr.*

Financing extracurricular activities. Unpublished master's thesis, *North Carolina university*, 1928.

MAY, E. O. One fee for all pupil activities. *School review*, 37: 304-6, April 1929.

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MEYER, HAROLD D. and EDDLEMAN, SAMUEL MCKEE. Financing extracurricular activities. *New York, N. Y., A. S. Barnes and co., 1929.*

Examines current practice with respect to raising extracurricular funds, in order to ascertain prevailing methods, and to determine better methods of distributing money and methods of accounting for extracurricular funds. Discusses attitudes of administrators, criteria for choosing methods and the financing of some individual activities, and describes the extracurricular accounting systems used quite successfully at Ypsilanti, Mich., at Washington high school, Massillon, Ohio, and at Huntington, W. Va.

MORAN, W A. High-school activities finance plan. *American school board journal*, 80: 66, May 1930.

RIDDICK, J. D. Financing extracurricular activities in the large high school. *Virginia journal of education*, 23: 248-50, February 1930.

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ROSA, H. M. The financing of student activities. *High-school teacher*, 2: 408-9, December 1926.

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BULLOCK, ALBERT E. The administration and supervision of high-school student-body finances. *Balance sheet*, 9: 8-16, March 1928, 9: 16-25, 48, April 1928, 9: 45-54, 63, May 1928.

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CAREY, RAYMOND B. The administration of the finances of extracurricular activities. *Educational research record*, (University of Nebraska publications) 4: 5-12, October 1931.

CORBITT, GORDON P. A method of financial administration of extracurricular activities in small to medium-sized high schools. M. A. thesis, 1931. *Ohio State university, Columbus, Ohio.*

Des Moines. Business administration of high-school activities in Des Moines. *American school board journal*, 71: 68, 70, 72, 74, November 1925.

FRETWELL, E. K. Extracurricular finances. In *his* Extracurricular activities in secondary schools. *Cambridge, Mass., Riverside press, 1931, p. 444-75.*

Methods of extracurricular financial accounting and administration used in over 200 schools. Discusses methods of budgeting extracurricular costs, explains extracurricular support, and suggests student accounting methods.

HENZLIK, F. E., and others. Practical economies in school administration. Extracurricular activities. *University of Nebraska, extension division, Lincoln, Nebr., 1932. p. 144-49, 199.* (University of Nebraska publications, educational monograph no. 8, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

Indiana. KIRKLIN, CURTIS D. The administration of athletic funds in Indiana high schools. *Bloomington, Ind., Indiana university.*

LOS ANGELES SCHOOL DISTRICT. Rules for conducting student or school funds and certain activities in all day and evening, elementary, junior and senior high schools, and junior college. *Los Angeles, City school district, 1931. 16 p.* (Special bulletin, no. 4, August 31, 1931.)

A complete, fully indexed, easily accessible list covering all parts of the public-school system, with rules presumably found advisable from previous experience. Of great value to any system needing such a set of rules.

MARSHALL, J. J. Administration of the funds of school organizations. *School review*, 37: 251-52, April 1929.

This plan has a faculty member chosen to act as trustee of all pupil activity funds, a local bank as depository, and a committee of three faculty members to audit the books at the end of the fiscal year. The faculty sponsor of each organization checks the receipts and sees they are deposited with the trustee.

McKOWN, HARRY C. Financial administration of extracurricular activities. *National society for the study of education*, 25: 111-27, 1926. Title of yearbook—Extracurricular activities.

Criticizes the present slipshod methods of support, and suggests that the school board subsidize such activities. Shows the 1924 median annual per pupil cost of extracurricular activities. Discusses three different types of financial

organization; accounting of extracurricular activities operated through the principal's office, the commercial departments, and school banks.

MEYER, HAROLD D. Financing extracurricular activities. *New York, N. Y., A. S. Barnes co., 1929.* 132 p.

A compilation of types of methods and systems in use for handling the money accruing from extracurricular activities with specific descriptions of the budget and accounting system. Suggested forms adaptable to all types of schools and based upon most modern educational principles. Appendices give plans of Kansas, Michigan, Ohio, and West Virginia.

MYERS, W. H. Financial control of student activities. *American school board journal, 79:48, November 1929.*

All activities should be financed and administered through a central-control plan, each activity presenting its yearly budget estimate to the central committee.

New York City. BOARD OF EDUCATION. Collection of moneys in the public schools. *New York, N. Y., Board of education, 1924.* 50 p.

TINK, E. E. Handling funds of school organization. *Journal of education, 111:738-39, June 30, 1930.*

Outlines and details a plan used in Eldorado, Kans., for handling the finances of the various organizations and activities functioning within the school and controlled by the school principal.

FEDERAL

AID

See also Vocational Education, Federal Aid

BALLOU, FRANK W. Federal aid to education. *School and society, 29:406-8, March 30, 1929.*

Explains the theories, methods, and amounts of various Federal aids to education, and the work of the U. S. Office of Education and the Federal Board for Vocational Education. Considers undesirable the continued separation of vocational education activities from the general educational program.

Brief written in support of Federal aid for schools. *Missouri school journal, 44:347-48, December 1928.*

An argument favoring Federal support of education, using data which reveal that much illiteracy exists in the United States. Calls attention to the need of an Americanization program, of a national program of education for greater physical efficiency and for hygienic purposes, and to the lack of adequately trained teachers, and to the inequalities of educational opportunities.

CUMSKELLEY, E. P. State school administration. *New York, N. Y., Houghton Mifflin co., 1927.* p. 489-511.

Seeks some practical definition of the obligation of the Federal Government to subsidize State education systems by

analyzing the various factors affecting the inequalities of the States to support an effective educational program and the National character of equal educational opportunities.

EVANS, R. M. Federal aid for education in Florida. *Journal of the Florida education association, 6:8, 26, October 1928.*

Federal aid to education. *Western school journal, 19:851, February 1924.*

Federal and local support of schools. *School and society, 29:845-46, June 1929.*

GIBSON, CARLETON B. Dollar for dollar. In National education association. Addresses and proceedings, 1925. p. 779-81.

Hearings before the committee on education. House of Representatives, 68th congress, first session on H. R. 3923. *Washington, U. S. Government printing office, 1924.* 763 p.

Hearings before the committee on education and labor, U. S. senate, 68th Congress, first session on S. 1337. *Washington, U. S. Government printing office, 1924.* 402 p.

KRESECKER, WARD. Digest of legislation providing Federal subsidies for education. *Washington, U. S. Government printing office, 1930.* 52 p. (U. S. Office of education. Bulletin, 1930, no. 8.)

KEITH, JOHN A. H. Results of federal aid to education. *Social forces, 5:305-14, December 1926.*

KOELMEIER, A. L. and BRYAN, W. L. Educational policies of the United States government and federal aid to education. *Bloomington, Ind., Indiana university, 1930.* 16 p. (Indiana university studies, study, no. 87.)

A general discussion of Federal aid to education, including a review of the legislation of the Federal Government granting aid to the States for general education before and after 1862, and Federal aid for technical education since 1862.

MACDONALD, AUSTIN F. Federal subsidies to the States. *Philadelphia, Pa., World printing co., 1923.* 122 p.

MOREY, LLOYD. Editorial. *Educational business manager and buyer, 8:26-27, December 1931.*

Concise review of the most fundamental recommendations submitted by the National advisory committee concerning the financial relations of the Federal Government to education.

NATIONAL ADVISORY COMMITTEE ON EDUCATION. Federal relations to education. Part I. Committee findings and recommendations. p. 11-39, 83, 89. Part II. Basic facts, p. 1-133, 183-239.

The most authoritative statement in print. Part I recommends Federal financial support for education in the States for education in general and not for special phases of education, the grants to be administered by the regional governments only and to be made only on the basis of adequate educational and financial studies. Part II gives a history of Federal aid for education and many recent statistics on school costs and the amounts of Federal participation.

RIGHTMIRE, GEORGE W. Ignorance, like plague, can not be localized, educational opportunities must be equalized with Federal aid distributed in more localized avenues. *Ohio State university monthly*, 21: 355-56, 362, May 1930.

Analyzes the work of the National Advisory Committee on Education. States that since ignorance is no respecter of State lines, responsibility for education and educational opportunities must be equalized in a manner that will encourage local initiative.

SIMPSON, A. D. State and Federal aid. In Review of educational research. Finance and business administration number, vol. II, no. 2, April 1932. p. 148-62, 180-82. *National education association, Washington, D. C.*

Running review and bibliography of researches in this field, stressing those from 1923 to the fall of 1931.

STRAYER, G. D. and others. National and State responsibility for education. In *their Problems in educational administration*. New York, N. Y., Teachers college, Columbia university, 1925. p. 3-61.

Discusses State administration, the legal basis of a school system, State control of education, State department staff, rural education, organization of high-school districts, annual State reports of city superintendents, policy of State departments, and national responsibility for education.

SWIFT, F. H. Federal aid to public schools. *Washington, U. S. Government printing office*, 1923. (U. S. Office of education. Bulletin, 1923, no. 47.)

Federal and State policies in public-school finance in the United States. *New York, N. Y., Ginn and co.*, 1931.

Gives the history and recent trends of Federal aid to public schools. Lists the evils of decentralized support, examines sources of State school revenues, reviews methods of apportioning State school funds and equalization efforts. Outlines the uses and distribution of State funds and the equalization programs of Arkansas, Delaware, Massachusetts, Utah, and Wisconsin.

Washington correspondence: Supporting education and distributing school funds in an attempt to help schools through the financial crisis. *School executives magazine*, 51: 76, October, 1931.

A view of Federal aid, notes on a proposal for distributing Florida State aid on an instructional basis, and on Arkansas antideficit law.

WILBUR, RAY LYMAN. Federal and local support of schools. *School and society*, 29: 845-46, June 29, 1929.

Secretary Wilbur defines the places of State and Federal Governments relative to the support of educational responsibility. Sees a distinct menace in national centralization of educational functions and support. Expresses opinion that the widest development is possible when the bulk of expenditures for education is raised and spent in local districts and only a small amount from central government.

WILSON, MABEL V. Federal aid to education. In *National education association. Addresses and proceedings*, 1925. p. 383-94.

POLICIES

NATIONAL ADVISORY COMMITTEE ON EDUCATION. Federal relations to education. Part I. Committee findings and recommendations. 140 p. Part II. Basic facts. 448 p. 744 Jackson Place, Washington, D. C. *National advisory committee on education*.

The most authoritative statement in print and one likely to have great influence for the future. The financial items cover mainly the history of Federal aid for education and recommendations on the use of such aid (See Federal aid). Brief financial data appear with the treatment of any one phase of education, e. g., Education of Indians.

STATISTICS

[Federal statistics on Governmental expenditures with percentages for education appear in the standard Cost of Government series of the National Industrial Conference Board, the latest issued in 1931, covering the latest previous feasible for the various items. Sources of data indicated. Other Federal statistics sources are indicated in connection with the topics to which they refer, e. g., City School Systems and Income]

FEEBLE-MINDEDNESS, COSTS

PHILLIPS, FRANK M. Schools and classes for feeble-minded and subnormal children, 1928-27. *Washington, U. S. Government printing office*, 1928. 21 p. (U. S. Office of education. Bulletin, 1928, no. 5.)

Statistics on value of property, receipts and expenditures grouped into private and state institutions.

PHILLIPS, FRANK M. Schools for feeble-minded and subnormal, 1927. In *Statistical summary*. p. 3. Washington, U. S. Government printing office, 1930. p. 3. (U. S. Office of education. Bulletin, 1930, no. 3.)

Some financial statistics similar to those for previous years in corresponding bulletins.

FINANCE, PUBLIC

FOREIGN

[Extensive collections in this field exist at the libraries of universities emphasizing international relations, e. g., the Benjamin Strong collection of Foreign Public Finance at Princeton University.]

GENERAL

See also Taxation, General

BULLOCK, CHARLES J. Selected readings in public finance. Boston, Mass., Ginn and co., 1924. 982 p.

JENSEN, JENS P. Problems of public finance. New York, N. Y., Crowell publishing co., 1924. 606 p.

LUTZ, HARLEY L. Public finance. New York, N. Y., D. Appleton and co., 1929. 681 p.

Improved revision of the first edition (1924) of this comprehensive and fundamental treatment of theory, principles, and methods. Analyzes governmental expenditures since 1792, and city expenditures, including those for education, since 1904. Includes such topics as increasing expenditures, economic effect and control of expenditures, administrative revenues, the requisites of a sound tax system, distribution of the tax burden, general property tax, modified property tax, income tax, corporation tax, excise and inheritance tax, local debt, refunding of debt, and governmental budgets. Statistics and fundamental economic theory supplement the discussion.

SCHULTZ, WILLIAM J. American public finance and taxation. New York, N. Y., Prentice-Hall, 1931. 635 p.

A good college textbook by the former financial economist of the national industrial conference board. Well balanced, descriptive with much factual information.

STATES

See Taxation, States, Individual

FINANCE, SCHOOL

BIBLIOGRAPHIES

This includes only general school finance items. For bibliographies on any head, e. g., Budgets of City School Finance, see that head.

ALEXANDER, CARTER. Bibliography on educational finance. Educational finance inquiry. New York, N. Y., MacMillan co., 1924. Vol. IV. 257 p.

An unusually well-classified list of annotated items up to January 1, 1923. Covers the field thoroughly. Extremely accessible, indexing by subject and author with a running index at tops of pages.

— Educational finance studies. New York, N. Y., Bureau of publications, Teachers college, Columbia university, 1931. 92 p.

Summaries and evaluations for school administrators of 19 recent educational finance dissertations at Teachers college, Columbia university.

— Opportunities for research in educational finance. *Educational administration and supervision*, 9: 209-22, April 1923.

This article discusses the uses of available materials, types of inquiry, new research techniques, new prediction techniques needed in educational research methods, and personal qualifications for research. Encourages research to discover the efficiency of contemporary educational policies, the spending power of fiscal areas, possible economies, and methods for raising adequate funds for education.

— and others. Review of educational research. Finance and business administration number, Vol. II, no. 2, April 1932. American Educational research association. *National education association, Washington, D. C.*

Covers 1923 to fall of 1931 with running review and a selected bibliography of researches for each chapter. Chapters on public-school accounting, public-school budget, revenues and taxation, public relations, research and survey techniques, finance and business management in institutions of higher education, fiscal control and textbooks in business management of schools, financial economies in business management of schools, and Federal and State aid. Chapters listed in this bibliography under pertinent heads.

U. S. OFFICE OF EDUCATION. Bibliography of research studies in education. Educational finance. Washington, U. S. Government printing office, 1928-29. p. 169-77. (U. S. Office of education. Library division)

A partially annotated bibliography of 100 research studies in educational finance from 1928-29. Authors arranged alphabetically and numerically numbered from 1895-1894. Similar sections in other numbers of this series.

GENERAL

BALDWIN, ROBERT D. A brief sketch of the problem of public-school finance. *American school board journal*,

75: 61-63, 140, 143-44, December 1927.

A discussion illustrated with relevant data of rising school costs, some relative values, inequalities within States, the property tax problem, other bases for taxes, source of all taxes, some State plans, needed budgetary modifications and local leadership designed to set forth an outline of public-school finance problems.

BALLOU, F. W. Achievements of American education: finance. In National education association. Department of superintendence. Official report, 1930. Washington, D. C., National education association, 1930. p. 85-90.

Increased enrollments, curriculum offerings, the extension of educational opportunities, and building programs caused a tenfold increase in capital outlay during 1913-1930. Comprehensive changes in methods of planning, developing, and eliminating unnecessary costs in school-plant construction is the result of research, surveys, documents, and technique. School buildings are now planned with cognizance of the progress of science and the influence which new inventions or new vehicles of instruction may have upon future building.

BECHT, J. GEORGE. Financing American public schools. *American educational digest*, 43: 221, January 1924.

CALLAHAN, JOHN. The foundation of our public-school system. *Wisconsin journal of education*, 58: 230-32, February 1926.

DAVIS, STURGIS BROWN. How improve the financial administration of schools? *American school board journal*, 80: 52-54, June 1930.

Does our present system of school finance show signs of breaking down? *Western school journal*, 26: 189-90, May 1931.

ENGELHARDT, FRED. Public-school organization and administration. Boston, Mass., Ginn and Co., 1931. P. 492-528.

Chapter XVIII deals with theories and practices in use relative to collection of revenues from their varied sources, accounting for this income efficiently, and when, how, and for what purposes to use debt service. Chapter XIX deals with data on school costs in its multitudinous forms, accounting for it by function, allocating service expenditures on a basis of units for measurements of, comparison of, and its relative nature, scientific determination and proper publication. Shows dependency of all factors upon costs.

ENGELHARDT, N. L. and ALEXANDER, CARTER. School finance and business management problems. New York City. Bureau of publications, Teachers college, Columbia university, 1928. xv, 526 p. tables, diagrams.

This book is the third volume in a series of problem-books in public-school

administration, prepared by the staff of the department of educational administration in Teachers college, Columbia university. Financing a public-school system is an outstanding problem in the light of the great amount of money needed and expended.

Financing American public schools. *American educational digest*, 43: 296-97, March 1924.

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GRAHAM, F. P. Addresses finance. *High-school journal*, 14: 65-68, February 1931.

HARDY, H. CLAUDE. A financial survey. *New York State education*, 13: 534-36, April 1926.

KNIGHT, ELMER J. Financing public education. *Colorado school journal*, 40: 5-17, January 1925.

LEWIS, E. E. Financing public education. *American school board journal*, 79: 41-43, 142, July 1929.

Financing public instruction. In National association of public-school business officials. Proceedings, 1929. p. 72-83.

A discussion of the increasing cost of education, and the inadequacy of the general property tax to meet this increase. Includes substantiating statistical tables on the relative weight of the factors affecting the increase in cost of education in Ohio, the sources of school support for the United States as a whole from 1890-1926 and a discussion of various taxes as possible sources of school support.

LINDSAY, E. E. Problems in school administration. New York, N. Y., Macmillan co., 1928. 544 p.

Includes a discussion of fiscal problems in school administration and presents actual case problems that any superintendent may be called upon to solve. Each chapter includes problems dealing with phases of school finance and business administration.

McLAUGHLIN, J. O. Facing the financial situation. *Oregon teachers monthly*, 31: 13-14, January 1927.

MOEHLMAN, ARTHUR B. Public-school finance. New York, N. Y., Rand McNally, 1927. 508 p.

From research and experience the author gives a detailed and comprehensive treatment of local school finance problems and methods. He discusses in detail, finance theory; policies, control and organization of finance machinery; finance publicity; he sets up forms and procedures for the administration of school budgets, and explains the uses of the very definite forms suggested for the administration of cost accounting and internal accounting.

MORRISON, HENRY C. Financial terms. *In* *Ms* The management of the school money. *Chicago, Ill., University of Chicago press, 1932.* p. 1-14.

Defines the fundamental and general school finance terms but the list is not exhaustive. Other terms are defined in the chapters in which they naturally appear.

— The management of the school money. *Chicago, Ill., University of Chicago press, 1932.* 522 p.

Theoretical treatment with practical illustrations. Examines and analyzes the natural and economic laws and the human urges which underlie the principles upon which American education is financed. Inquires into the purpose of the school, the economic and social effects of the school, suggests criteria for determining just what educational activities a society can afford to support, discusses economical and effective methods of support and planning, and devises a technique for estimating terminal costs.

MORT, PAUL R. How should we finance the schools of the United States? *North Carolina teacher, 7:167, 192, January 1931.*

— Teachers college influence upon the financing of public education. *Teachers college record, 30:572-77, March 1929.*

Reviews the work of Cubberley, Swift, Updegraff, Strayer, Haig, Morrison, Simpson, Clark, himself, and others, as an estimate of teachers college influence upon the financing of education. Includes a consideration of the educational significance of these changes.

NATIONAL EDUCATION ASSOCIATION. DEPARTMENT OF SUPERINTENDENCE. Ninth yearbook. Fiscal articulation through the organization of the agencies of educational control. *Washington, D. C., National education association, 1931.* p. 281-301, 351-58.

Discusses purpose of financial consideration, State and local relationships, Federal and State relationships, articulation through common governing bodies, decentralization, control of institutions for preparation of teachers, miscellaneous units of control, control through common boards, and includes a summary and conclusions.

— **RESEARCH DIVISION.** A handbook of major educational issues. *Washington, D. C., National education association, 1928.* p. 200-17. (Research bulletin, vol. 4, no. 4, September 1928.)

Median salaries paid all classes of teachers in the United States, 1924-25, total value of school property and average value per pupil enrolled in 1924, and State contributions to financial support of schools, 1923-24 are presented statistically. Outlines the New York plan of equalization of educational opportunity and discusses other nonfinancial educational issues.

— State advance toward sound school finance programs. *Washington, D. C., National education association, 1927.* p. 30-41. (Research bulletin, vol. 5, no. 1, January 1927.)

— The advance of the American school system. *Washington, D. C., National education association, 1927.* 62 p. (Research bulletin, vol. 5, no. 4, September 1927.)

Increases in value of public school property, 1886-1926; a graph of progress toward adequate school plants, 1920-25; average salaries of teachers and supervisors in 1925; comparisons of school salaries with salaries of other groups, 1913-1926; expenditures of public elementary and secondary schools per pupil in attendance 1924-25, by States, and indications of economic conditions of the States and their expenditures for education are presented, graphically, statistically, and verbally.

NEWCOMER, M. Financial statistics of public education in the United States, 1910-1920. *New York, N. Y., Macmillan co., 1924.* (Educational finance inquiry commission series. Vol. VI.)

NOBLE, M. C. S. New problems in public-school finance. Raleigh, N. C., State department of education. *American school board journal, 88:82, November 1931.*

PHELPS, SHELTON. Financing education. *School and community, 12:514-16, December 1928.*

PITTINGER, B. F. An introduction to public-school finance. *New York, N. Y., Houghton Mifflin co., 1925.* 872 p.

This is a general discussion of the problems of public-school finance. It examines the school-finance situation and discusses comparative costs in education, financial records and accounts, school indebtedness, control of school finances, school publicity, educational inequalities, units of school support, apportioning of funds, and sources of school revenues. Suggests methods and techniques for solving various school finance problems.

— **and WORKS, G.** Financial support. *In* Texas educational survey commission report. *Fort Worth, Tex., Texas educational survey commission, 1925.* Vol. II. 152 p.

PRATT, O. C. Some matters of finance. *Washington education journal, 10:228-29, 256, April 1931.*

PRICE, RICHARD R. The scientific study of problems in educational finance. *School and society, 20:543-52, November 1, 1924.*

A discussion of 19 specific problems of applying scientific methods to the financial administration of elementary, secondary, and higher education. Analyzes

- problems of securing adequate support, equalizing educational burden, determining sources of revenue, financial control, distributing State aid, thrift and efficiency, rural high-school support, support of higher education, college building costs, tuition fees, public relations, budgeting, new sources of revenue, and possible retrenchments, as an outline for some systematic and scientific educational finance procedures.
- Public schools—a monster business enterprise. *American school board journal*, 78: 64, March 1929.
- RAINY, HOMER P. Public-school finance. *New York, N. Y., Century co.*, 1929. 385 p.
- Discusses general theory of educational support and most recent practices relating to administrative control of public-school finances. Gives the needs, methods, units, policies, and theories necessary to the proper training of an administrator, with tables and charts.
- School finance problems; how solved. *American school board journal*, 69: 49, 132, December 1924.
- SEARS, JESSE B. Financing public education; *Montana education*, 1: 17-22, 24-26, January 1925. Also *Utah educational review*, 18: 332-35, April 1925.
- SEARS, JESSIE B. Some problems in public-school finance. *Journal of educational research*, 10: 257-70, November 1924.
- Something of school finance. *School and community*, 10: 2-3, February 1930.
- SPALDING, GEORGE. Public finance; its trend; plea made for control of public expenditures. *Tax digest*, 6: 365-76, November 1928.
- STRAYER, GEORGE D. Financing education on a scientific basis. *School and society*, 21: 243-47, February 28, 1925.
- A discussion of interest, depreciation charges, three methods of predicting costs, determination of economies which can be effected without decreasing school efficiency, equalization of educational opportunity, measurement of costs involved in minimum programs, uniform local taxes, distribution of State aid, and the obligation of the Nation to support education.
- How are we to finance public education? In National association of secondary school principals. Eighth yearbook, 1924. p. 193-95.
- A discussion of State responsibility for education, the county unit, income, business, severance and luxury taxes, and programs of State equalization as processes in adequate financial administration.
- Progress in the administration and support of schools during the first quarter of the twentieth century. In National education association. Addresses and proceedings, 1925. p. 17-22.
- Traces the development of larger units of school support, progress in the selection, payment and tenure of teachers, equalization provisions, methods of accounting, increased school cost and expanded school services.
- and BARNES, C. H. Articulation through financial adjustment. Washington, D. C., National education association. Department of superintendence, 1931. p. 268-70.
- Discusses the mutual responsibility of urban and rural people for the education of all the children of the State. It suggests establishing a State standard program of education with financial burden equalized on the basis of a tax which leaves the community free to extend the program beyond that required for support by the State, and better administration and supervision of rural schools.
- and others. Financing the schools. In their Problems in educational administration. New York, N. Y., Teachers college, Columbia university, 1925. p. 127-98.
- Successful financial scheme. *American school board journal*, 75: 50, 154, August 1927.
- Ten facts on financing public education. *Journal of the national education association*, 21: 26, January 1932.
- Useful data on school costs, taxes, teachers' salaries, and some accomplishments of American education, in 1928.
- U. S. OFFICE OF EDUCATION. School administration and finance, 1928-1930. By Walter S. Deffenbaugh and Timon Covert. Washington, U. S. Government printing office, 1931. 58 p. (U. S. Office of education, Bulletin, 1931, no. 20, Vol. I, Chapter I.) (Advance pages of the Biennial survey of education in the United States, 1928-1930.)
- The second section of the bulletin reviews school finance in the United States during the decade 1920-1930. Includes many relevant data.
- WERNER, J. O. Financial problems in educational administration. *Pennsylvania school journal*, 77: 605-7, June 1929.
- WILES, L. A. Public school finance. *Detroit educational bulletin*. (Research bulletin, no. 12, June 1927.) p. 67-70.
- WITHERS, JOHN W. The trend in educational finances in the United States; particularly as related to secondary education. In University of Pennsylvania. Thirteenth annual schoolmen's week. Proceedings, 1926. p. 819-25.

FIRE INSURANCE

ACCOUNTING

JUCHOFF, FREDERICK. Treatment of fire loss in the account records. *Business educator*, 29: 23-24, October 1923.

ECONOMIES

BLISS, VINCENT. Recent measures that have lowered the cost of fire protection. *Nation's schools*, 6: 73, August 1930.

Points out that changes made by the National Fire Protection Association in the regulations governing the installation of automatic sprinklers have resulted in a 20 to 30 per cent reduction in the cost of safeguarding schools from fire.

ORDWAY, G. G. The case against self insurance. *American school board journal*, 81: 89, May 1931.

Enumerates objections to self-insurance plans for school buildings and cites assessment and political difficulties, instances of inarticulation and laxity, and violations of insurance principles.

SMITH, HARVEY A. Economy in public-school fire insurance. Doctor's thesis, 1930. *Teachers college, Columbia university, New York, N. Y.* Teachers college, Columbia university, 1930. 111 p. (Contributions to education, no. 428.)

The purpose of this study was to discover economical and safe methods of insuring public school buildings against fire. The study aims to point out methods of reducing premium costs by removing such fire hazards as may exist in school buildings; to point out methods of economy through proper insurance procedure; and to determine whether self-insurance and State insurance are practical and economical.

WERNER, J. C. Economy and equalization in insurance expenditures. *American school board journal*, 81: 44, November 1930.

Discusses the advantages of the 5-year renewal term for insurance which will effect a saving and will equalize the budget expenditures for insurance for Coraopolis, Pa.

GENERAL

BROWN, GLEN D. Planning and executing a public-school insurance program. Master's thesis, 1931, *Indiana University, Bloomington, Ind.*

BRUCE, WILLIAM G. Fire insurance for school property. *American school board journal*, 70: 101, April 1925.

BURKE, T. A. What would fire mean to your school? *School executives*

magazine, 51: 256-57, 280, February 1932.

Statistics on financial losses due to school fires, and the causes of these fires. Preventative measures and controls.

DRAKE, W. V. The insuring of school property in Columbus. In Ohio State educational conference. Seventh annual proceedings, 1927. p. 460-62. (Ohio State university bulletin, vol. 32, no. 3.)

Fire insurance and fire prevention. *American school board journal*, 74: 136, 139, April 1927.

Fire insurance for school property. *American school board journal*, 70: 101-2, April 1925.

HARDY, EDWARD R. The making of a fire insurance rate. *New York, N. Y., The Spectator co.*, 1926. 236 p.

MELCHÔIR, WILLIAM T. Insuring public-school property—an intensive report of insurance practices in school districts of N. Y. State. In Costs and losses. *New York, N. Y., Teachers college, Columbia university*, 1925. 187 p. (Contribution to education no. 168.)

MORTON, W. H. School property insurance. *School executives magazine*. 51: 305-6, March 1932.

Emphasizes the co-insurance plan, with suggestions for economy in the appraisal, depreciation, reduction in rates, length of term of policy, and type of policy. Tables and figures.

REEDER, WARD G. Community insurance of school buildings. *Educational research bulletin (Ohio State university)*, 4: 161-62, April 15, 1925.

Insurance. In his The business administration of a school system. *Boston, Mass., Ginn and co.*, 1929. p. 287-318.

Discusses fire as a destructive force in school buildings, its prevention, control, and safeguards, including exits, fire signals, drills, inspection, and school buildings as insurance risks. Cites from surveys in Pennsylvania, New York, and Oregon showing fire losses of 43, 35.6, and 40.1 per cent of the premiums. Discusses various types of property and equipment insurance, terms, and amounts.

SMITH, HENRY L. and NOWTSINGER, FORREST R. First supplement to the bibliography of school buildings, grounds, and equipment, August 1927 to April 1932. Vol. IX, nos. 1 and 2, September-November 1932. (Scheduled for bulletin of the school of education of Indiana university.)

SMITH, H. P. Business administration of public schools. *Yonkers-on-Hudson, N. Y., World book co., 1929.* p. 251-66.

This section of the book on school administrative problems defines individual, schedule and blanket insurance policies, and discusses the appraisal of school property, ratio of insurance to sound value, determination of rates, allotment of school insurance, maturing of policies, insurance records, proof and settlement of losses, and fire prevention as efficient and economical methods of insurance.

— Insuring school property. In his Business administration of public schools. *Yonkers, N. Y., World book co., 1929.* p. 245-66.

Presents four principles of insuring school property, and discusses the methods and types of insurance, as well as kinds of policies. Outlines methods of appraising property and determining insurance rates, of allocating insurance, of accounting for and recording insurance, and for settlement of losses. Considers prevention precautions the best type of insurance.

THOMAS, H. H. Insurance program for schools. *Nebraska educational journal, 11: 135, March 1931.*

Suggests a co-insurance plan as giving a more complete coverage. Recommends a careful survey of all contents of school buildings for adequate insurance and a policy bought for a period of five years. Cites a recent survey showing that 5 per cent of the superintendents were ignorant of the insurance program of their respective schools.

TRAUTSCHOLD, REGINALD. School and college building fire losses. *American school board journal, 71: 108, August 1925.*

STATES, INDIVIDUAL

Alabama. PLATTS, P. K. Does State insurance on school property pay? *American school board journal, 83: 59, July 1931.*

Presents statistical data on the amount of savings accumulated over a period of years by the various State and city insurance organizations on public-school property. Attempts to find a way to increase Alabama's plan of insurance so that more funds may be made available for schools.

BEYER, WALTER F. The practicability of State insurance funds. *American school board journal, 83: 48, 116, 119, September 1931.*

Concludes that State insurance is not the best method of insurance, is quite specific and builds up a case out of an actual situation.

MCCAHAN, DAVID. State insurance in the United States. *Philadelphia, Pa., University of Pennsylvania press, 1929.* 279 p.

One chapter deals with State property insurance funds in the United States, giving special consideration to two types

of funds, emergency-reserve appropriations as used by 14 States, and self-insurance funds as used by 7 States.

Minnesota. SKAALAND, S. G. Insuring school property in Minnesota. *Minneapolis, Minn., University of Minnesota, 1925.* 105 p.

New York. Insurance for school buildings. *American school board journal, 81: 46, July 1930.*

Discusses the advantages and disadvantages of the four general plans of insurance being considered for New York State—not including New York City—which will offer the maximum relief to the taxpayers.

— MELCHIOR, WILLIAM T. Insuring public-school property. *New York, N. Y., Teachers college, Columbia university, 1925.* 187 p. (Contributions to education, no. 168.)

North Dakota. OLNES, S. A. and HORTON, HAROLD. Complete report of the State bonding fund of the State of North Dakota. In Commissioner of Insurance. *Bismarck, N. Dak., Commissioner of insurance, 1927.* 110 p.

Pennsylvania. Schoolhouse fire insurance in Pennsylvania. *American school board journal, 81: 58, November 1930.*

SMITH, HARVEY A. State insurance. In his Economy in public-school fire insurance. *New York, N. Y., Teachers college, Columbia university, 1930.* p. 102-6. (Contributions to education, no. 428.)

Analyzes case studies and formulates a theory of insurance and analyzes insurance terms. Describes State insurance, fire insurance rating systems, and fire insurance methods and procedures. Gives the statistics of fire losses and city self-insurance, and draws conclusions.

FISCAL CONTROL

CITY

Beaumont, Tex. Report of the survey of the schools of Beaumont, Tex. *New York, N. Y., Teachers college, Columbia university, 1927.* Chapters I-II. (Teachers college, Columbia university. Division of field studies.)

Duval county, Fla. Report of the survey of the schools of Duval county, Fla., including the city of Jacksonville. *New York, N. Y., Teachers college, Columbia university, 1927.* Chapters I-II. (Teachers college, Columbia university. Division of field studies.)

Fort Worth, Tex. STRAYER, G. D. and ENGELHARDT, N. L. Report of school survey. *New York, N. Y., Teachers college, Columbia university*, 1931. p. 1-2

Lynn, Mass. Report of the survey of the schools of Lynn, Mass. *New York, N. Y., Teachers college, Columbia university*, 1927. p. 5-8. (Teachers college, Columbia university. Division of field studies.)

MOGAUGHY, J. R. The fiscal administration of city school systems. In report of Educational finance inquiry commission. *New York, N. Y., Macmillan co.*, 1924. vol. 5. 95 p.

MOEHLMAN, ARTHUR B. Finance organization. In his *Public-school finance*. *New York, N. Y., Rand McNally*, 1927. p. 32-51.

Shows that general organization of the educational finance department depends upon the way the function evolved, authoritative opinions, present practices, and adjustment of diverse practices. Cites plans in force in St. Louis, Cleveland, Chicago, New York, and Detroit.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Who should control city school expenditures? *Washington, D. C., National education association*, 1924. p. 27-32. (Research bulletin, vol. 2, no. 1-2, January, March 1924.)

Newburgh, New York. Report of school survey. *New York, N. Y., Teachers college, Columbia university*, 1929. p. 259-60.

New York State. YOUNG, D. S. Control of available public-school income. *New York, N. Y., Teachers college, Columbia university*, 1928. Chapters II and III. (Bureau of publications publication.)

An intensive investigation of certain phases of income control (external and internal) through a study of the method used in the public-school systems of 43 cities and 7 villages of New York State in 1924-25. Considers the type of revenue control, effectiveness of present local budgetary control, extent to which public-school moneys become available as needed, the controls now affecting the timely receipt of public-school income, the adjustments made when school revenues are not received as needed, and how moneys received in advance of needs are administered.

— Special joint committee on taxation and retrenchment of the State of New York. Fiscal problems of city school administration. *Albany, N. Y., State publishers*, 1928. 180 p. (Legislative document, no. 66.)

A statement of problems, together with recommended solutions, relating to the levying of taxes, control of the budget, and issuance of school bonds. Appen-

dices contain statistical data on unit costs of education in the State.

PITTINGER, B. F. The control of school finances. In his *An introduction to public-school finance*. *New York, N. Y., Houghton Mifflin co.*, 1925. p. 175-208.

Isolates and places the responsibilities for the control of school finances. Investigates prevailing practices, and suggests more scientific ones. Presents general underlying principles and plans of administrative organization.

Port Arthur, Tex. Report of school survey. *New York, N. Y., Teachers college, Columbia university*, 1928.

Providence, R. I. Report of school survey. *Providence, R. I., Board of education*, 1924. p. 7-11. (A. T. C. survey.)

Public management: Relation of the school budget to the general municipal budget. *Public management*, 12: 551-56, November 1930.

A study of the relationship of the school budget to the general municipal budget in 29 council-manager cities. Includes a short sketch of the status of each city school budget, showing its relationship to the municipal budget either as a part of the municipal budget or as a separate and independent budget.

SAUNDERS, J. H. Financial independence of school boards. *Virginia journal of education*, 25: 227-29, February 1932.

SCHENCK, C. M. The control of school finances by city officials; its advantages and disadvantages. *American school board journal*, 69: 54-56, July 1924. Also published in *Home, school and community*, 16: 6-7, 10, August-September, 1924.

Seattle, Wash. Studies in administrative research. *Seattle, Wash., Board of directors*, 1925. p. 1-61. (Bulletin, no. 2.)

Tampa, Fla. STRAYER, G. D. and ENGELHARDT, N. L. Report of school survey. *New York, N. Y., Teachers college, Columbia university*, 1928. p. 1-3.

Watertown, Mass. STRAYER, G. D. and ENGELHARDT, N. L. Report of school survey. *New York, N. Y., Teachers college, Columbia university*, 1931. p. 1-4.

YAKEL, RALPH. The city government and its control over school expenditures. *American school board journal*, 79: 39-41, 126, August 1929.

Discusses the legality of school board control of expenditures, the final responsibility of the State for education, the right of the people to vote taxes, and the fact that education is a matter of general rather than local concern.

GENERAL

ALMACK, J. C. The school board member. *New York, N. Y., Macmillan co.*, 1927. 281 p.

COOPER, WILLIAM JOHN. "Divided houses" that endanger public education. *Nation's schools*. 8: 31-35, August 1931.

Emphasizes the unity of school control. Discusses dual control and fiscal independence first on the national, State, city, government levels, and second within the school administrative organization. Stresses the importance of the task of the school business manager as a "second mate" in the administrative organization.

Minnesota. OVERN, A. V. The control of the tax income of school districts in Minnesota; a comparison with methods of other States. *American school board journal*, 74: 47-48, April 1927.

MOEHLMAN, ARTHUR B. Finance control. In *Ms Public-school finance*. *New York, N. Y., Rand McNally*, 1927. p. 200-11.

A consideration of public-school revenue control and administration of income and expenditures. Recommends financial independence of school board, but gives data on three types in use.

NATIONAL EDUCATION ASSOCIATION. DEPARTMENT OF SUPERINTENDENCE. Fiscal aspects of articulation. In *National education association*. Department of Superintendence. Ninth yearbook. p. 275-358.

NUSBAUM, L. Local aspects of fiscal articulation. In *National education association*. Department of superintendence. Official report, 1931. *Washington, D. C., National education association*, 1931. p. 262-63. (Abstract.)

Emphasizes the need for better articulation of fiscal matters between every phase of community and school work. Points out essential procedure basis for the success of a local educational program. Emphasizes the need for cooperation with parents in securing financial support.

Ohio. MILES, RUFUS E. Fiscal control in Ohio. *Annals of American academy*, 118: 105-12, May 1924.

OLSEN, H. C. The work of boards of education and how it should be done. *New York, N. Y., Teachers college, Columbia university*, 1926. Chapters III-IV.

REEDER, WARD G. Fiscal control and textbooks in business management of schools. In *Review of educational research*. Finance and business administration number, vol. II, no. 2, April 1932. p. 134-8, 174. *National*

education association, Washington, D. C.

Review and bibliography of researches in this field, stressing those from 1928 to the fall of 1931.

School boards control own funds: the Schenectady salary decision. *American school board journal*, 81: 40, July 1930.

South Carolina. Should schools be guaranteed fiscal independence? *South Carolina education*, 5: 12, February 15, 1924.

SPALDING, GEORGE. Public finance; its trend; plea made for control of public expenditures. *Tax digest*, 6: 365-76, November 1928.

STRAYER, G. D. Creative administration. *Teachers college record*, 27: 1-5, September 1925.

— The scientific approach to problems of educational administration. *School and society*, 24: 68, December 1926.

— and others. Problems in educational administration. *New York, N. Y., Teachers college, Columbia university*, 1925. p. 71-86.

LEGAL

See also other Fiscal Control subheads

EDWARDS, I. N. Legal relation between school districts and municipalities. *Elementary school journal*, 30: 734-45, June 1930.

Cites cases decided before the courts upon various relations, considering the public school a State institution. The State may employ whatever agencies it sees fit to administer its policies. A city can not in absence of statutory authority spend its funds for public-school maintenance. All public-school buildings are State property and the State may adopt any mode of finance not prohibited by the constitution.

SMITH, JAMES H. Legal limitations on bonds and taxation for public-school buildings. *New York, N. Y., Teachers college, Columbia university*, 1931. 117 p. (Contributions to education, no. 453)

Shows by means of statistical data, the legal limitations on aggregate indebtedness of school districts in each of the forty-eight states, based on assessed valuations. Shows other legal limitations which apply especially to bonds, themselves, namely: approval, type, payment of principal, period of maturity, rate of interest, and sale. Considers the legal limitations on school tax rates for the 48 States.

SORER, W. W. Legal limitations on the rights and powers of the school board with respect to taxation.

New York, N. Y., Teachers college, Columbia university, 1929.

Deals with only the legal principles as derived from court decisions in order to show the legal limitations on the rights and powers of the school board with respect to taxation.

TRUSLER, H. R. Illegal expenditure of school money. *In his Essentials of school law. Milwaukee, Wis., Bruce publishing co., 1927. p. 288-321.*

Collects the different examples of illegal expenditures of school moneys as decided by the courts from 1870-1923. Discusses in detail 10 different examples and the court decisions given for each.

STATE

CALL, G. S. Fiscal control of State expenditures. *Annals of American academy, 113: 75-84, May 1924.*

FAIRLIE, J. A. State supervision of local finance. *American political science review, 19: 144, 149, February 1925.*

Presents a working outline which was prepared by the round-table conference on public finance, 1925, dealing with such matters as the purposes, objects, methods of supervision, and tentative standards for judging the methods of supervision in regard to budget procedures and financial information.

State supervision of local finance. *American political science review, 20: 147-52, February 1926.*

Review of several reports made in 1926 of studies by members of the American political science group. The reports concerned tax limitations in Ohio and in Illinois, State control of school finance in Indiana, supervision of local finance in New Jersey, and budget procedure in general.

MOEHLMAN, ARTHUR B. The price of tradition. Ann Arbor, Mich., University of Michigan. School of education. 1931. 3:2-4. (*University of Michigan bulletin, October 1931.*)

A strong article asserting that current Michigan school curtailments are due, as much to traditional localism in taxation, districting and carelessness in internal financing, as to the depression. Advocates removal of these difficulties after adequate study before doing any more with State aid.

New Jersey. KILPATRICK, W. State supervision of municipal finance in New Jersey. *National municipal review, 14: 490-501, August 1925.*

Oklahoma. BLACHY, F. F. and OATMAN, M. E. Fiscal control in Oklahoma. *Annals of American academy, 113: 84-93, May 1924.*

U. S. CHAMBER OF COMMERCE. Finance department. Relations between State and local governments, assessments, accounting, auditing, bond is-

ues, budgets, technical aid. *Washington, D. C., Chamber of commerce of the United States, 1928. 27 p. Document (6) 1318.*

This document outlines constructive tax relationships that should be established between State and local governments in regard to assessments; accounting, auditing, bond issues, budgets, and technical matters.

FISCAL INDEPENDENCE

See Fiscal Control

FIXED CHARGES

[Statistics will be found in the State and city school statistics bulletins, of the United States Office of education. See State statistics and city school statistics]

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter VIII. Fixed charges. *University of Nebraska, extension division, Lincoln, Nebr., 1932. p. 127-33, 190-92.* (University of Nebraska publications, educational monograph no. 3, 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

FOREIGN, GENERAL

For references giving data from foreign countries on a given topic, e. g. Costs or Pensions, see the topic with Foreign as a subhead

Canada. KRAWCHYK, S. Educational finance. *Manitoba teacher, 10: 14, April 1929.*

LATTA, S. J. The problem of financing the public schools of Saskatchewan. *Canadian school board journal, 3: 8, September 1924.*

LIDDY, W. R. The new basis for the apportionment of the legislative grant. *Canadian school journal, 10: 2-3, January 1931.*

Europe. How Europe views economy in education. *American school board journal, 73: 73, July 1926.*

Discusses the attitude of Germany and England, where it is assumed that even in a period of economic stress to reduce school expenditures is to reduce the health, physical, mental, and moral strength of the coming generation, and asks if comparatively wealthy America can afford to prepare her citizens less generously. States that this is a policy which no nation can afford to pursue.

Scotland. M'CLELLAND, W. W. *Scottish educational journal, 11: 46-49, January 18, 1928.*

SWIFT, F. H. European policies in financing public educational institutions.

A series of studies describing the policies of financing elementary, secondary, and higher educational institutions in Austria, Czechoslovakia, England, France, and Germany. (In preparation.)

TROTH, DENNIS C. History of State aid for education in the old world. In *his* History and development of common school legislation in Washington. Seattle, Wash., University of Washington press, 1927. p. 178-83.

FOUNDATIONS

American foundations and their fields. 1931. *Twentieth century fund, inc.* 29 p. 1931.

The work of 122 foundations during the last fiscal year, their financial status and fields of interest. A similar publication has been issued for several years.

KEPPEL, F. P. Opportunities and dangers of educational foundations. In Association of American universities. Journal of proceedings and addresses of the twenty-seventh annual conference. Chicago, Ill., University of Chicago press, 1925. p. 64-72.

A discussion of the principles that should govern the administration of educational foundations, by the president of the Carnegie Corporation. The task is to find capable individuals and set them to work in cooperative research, to become a clearing house of academic ideas, to aid scientific undertakings previously approved by a representative group of qualified persons, to cooperate with each other to avoid duplication of effort, and to safeguard their funds against unsocial use. He warns that foundation administrators must take constant care to use their funds for the advancement of knowledge and not the direction of opinion.

GENERAL CONTROL

See also Administration

[Statistics will be found in the State and city school statistics bulletins of the United States Office of Education. See State statistics and city school statistics]

California. General control economies. *California schools, State department of education.* Sacramento, Calif., March 1932. vol. 3, no. 3, p. 75-76.

GOVERNMENT COSTS

FEDERAL

See also Government Costs, Statistics

NATIONAL EDUCATION ASSOCIATION. Comparison of increases in education

costs and other national costs, 1928. Washington, D. C., National education association, 1930. p. 197-99. (Research bulletin, vol. 8, no. 4, September 1930.)

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Federal expenditures (1925-1928). In The cost of government in the United States functional distribution. New York, N. Y., National industrial conference board, inc., 1928. p. 6-8. (Similar figures in the volumes for other years.)

WHITE, CHARLES P. The trend in Federal expenses. *Annals of American academy of political and social science*, 113:1-8, May 1924.

STATE

See also Government Costs, Statistics; Finance, Public, States.

NATIONAL EDUCATION ASSOCIATION. Per cent public-school costs in the States is of total State expenditures, 1928. Washington, D. C., National education association, 1929. Chart 5. p. 20. (Research bulletin, vol. 7, no. 1, January 1929.)

New York. CLARK, HAROLD F. The cost of government and the support of education. An intensive study of New York State with results applicable over the entire country. New York, N. Y., Teachers college, Columbia university, 1924. 77 p. (Contributions to education, no. 145.)

Answers seven questions: What does all government cost in New York State, what part of the cost of each governmental unit is caused by education, how does the cost of education compare with other costs, have education costs increased more rapidly than other costs, what differences exist in the expenditure of various localities of New York State, do methods of finance effect the appearance of educational costs, what is the relation of educational costs to the ability of the people to pay? Twelve conclusions.

Ohio. The cost of government in Ohio, 1916 to 1929. Fourth preliminary report of the committee on research submitted to the Governor's taxation committee. Columbus, Ohio, Committee on research, 1930. 83 p.

The fourth in a series aiming to supply the governor's tax commission with factual data as soon as prepared. Covers trends in local and State government costs and sources of revenue in Ohio from 1916 to 1929, giving full data on 1928 and some data going farther back. Analyzes the property taxes and estimates future revenues and expenditures, and losses under various tax proposals. Implies that new sources of revenues must be found or expenditures must be radically curtailed. Data accurate and full.

State school costs and other governmental costs, 1928. *Journal of the National education association*, 19: 162, May 1930.

A table giving data on State school costs and their relationship to other governmental costs for each State in the Union. Subdivides taxes collected in 1928 under Federal, State, and local. Shows per cent of school tax to total tax collections; similar tables in previous years.

STATISTICS

[Statistics for governmental expenditures for all purposes and by functions appear regularly in the standard Cost of Government series of the National Industrial Conference Board, the latest being issued in 1931 and covering the latest years feasible for the various items. Amounts, percentages, and per capita for Federal, geographical sections, State, local, and individual State expenditures. Each volume gives important figures for several previous years. Sources of data indicated]

GROUP INSURANCE

GENERAL

ECKER, FREDERICK H. What group insurance means. *Review of reviews*, 78: 413-14, October 1928.

Defines group insurance and gives the financial history of group insurance in several large companies, showing that mass production in life insurance not only produces insurance protection at the lowest available cost, but also provides a basis of good will and a sympathetic understanding between employees and employer.

NATIONAL INDUSTRIAL CONFERENCE BOARD, Inc. A manual for mutual benefit associations. 1924.

— Experience with mutual benefit associations in the United States. 1923.

— Industrial group insurance. *Monthly labor review*, 25: 84-85, September 1927.

— Industrial group insurance. *New York, N. Y., National industrial conference board*, 1927.

New York. GRAHAM, WILLIAM J. Group insurance during seventeen years. *Nation's business*, 17: 200, February 1929.

Defines the group insurance laws in New York State, considers the present status, and discusses the trend during the past 17 years.

TEACHERS, FOREIGN

Canada. JEFFERSON, E. W. Group insurance. *Manitoba teacher*, 10: 5-7, December 1930.

— LOUGHEAD, W. J. Group insurance for teachers. *School*, 17: 626-28, March 1929.

Discusses three main schemes of group life insurance and the recent interest shown by teachers in this type of insurance as typified by Ontario group insurance schemes. Ninety per cent of the teachers and school caretakers in Ottawa favored such insurance.

— Group life insurance plan. *Manitoba teacher*, 11: 9, February 1930.

TEACHERS, GENERAL

BECHTOLD, R. H. Teachers group insurance. *Michigan education journal*, 7: 306, January 1930.

BURKE, EDWARD R. Group insurance. *Quarterly of Omaha school forum*, 11: 27, 38, January 1930.

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DAVIS, BURTON E. Group insurance for teachers. *School and society*, 28: 682-83, December 1, 1928.

Examines the status of group insurance in industry and commerce, the annual income of government employees, union laborers, and school employees during 1926 and compares the services of each group. The results indicate the need for teacher group insurance.

De Long, L. R. Group insurance for teachers. *Pennsylvania school journal*, 77: 211-12.

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MATHIAS, A. O. Group income insurance for teachers. *National league of teachers associations bulletin*, 9: 20-21, February 1926.

NATIONAL EDUCATION ASSOCIATION. DEPARTMENT OF SECONDARY SCHOOL PRINCIPALS. Group life insurance. *Washington, D. C., National education association* (Department of secondary school principals bulletin, 28: 25-26, October 1929).

Discusses group life insurance for the members of secondary school principals. Explains premiums, eligibility, and saving features. Amount of insurance to carry depends on whether 6 per cent of income of an estate will yield enough to support dependents at their present level of living.

— Group life insurance. *Washington, D. C., National education association*. (Department of secondary school principals bulletin, 33: 31-33, October 1930.)

This description of inexpensive life insurance points out the salient features as being low premiums, total and permanent disability features, 65-year age limit, individual policies, and current protection.

— Group insurance for teachers. *Washington, D. C., National education association*, 1930. (Research bulletin, vol. 8, no. 7-8, 1930)

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— Studies in state educational administration. In Group insurance for teachers. *Washington, D. C., National education association*, 1930. 8 p. (Research study, no. 3, 1930)

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will provide all teachers with liberal accident and sickness benefits at a 25 per cent saving. Lists six reliable insurance companies which will assist teachers in the organization of such plans.

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— Group insurance for teachers. In Department of classroom teachers. Fourth yearbook. *Washington, D. C., National education association*, 1929. p. 143-45.

Describes two forms of group insurance: Group life insurance purchased as an investment, or for the purpose of creating an estate for the benefit of dependents; and disability insurance purchased as a protection against illness or accident. Seventeen of 80 cities in 40 States have some form of group insurance.

— Group insurance for teachers. *New Jersey educational review*, 1: 21, December 1927.

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TEACHERS, HIGHER EDUCATION

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A report of a recent survey by the University of Oregon on group insurance for teachers in various colleges. Outlines a threefold plan.

Drexel Institute. WAGENSCHLER, W. R. The pension and retirement plan at Drexel institute. *Association of university and college business officers of Eastern States*, 1929. p. 62-65.

ESTER, J. A. Group life insurance for professors. *School and society*, 22: 449-53, October 1925.

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Minnesota. Outline of group life insurance for the employees of the university of Minnesota. *Minneapolis, Minn., University of Minnesota*, 1929.

Pennsylvania. The group insurance plan of the University of Pennsylvania. *School and society*, 24: 787-83, December 25, 1926.

SHAW, L. E. Compensation and employers liability insurance. *Association of university and college business officers of Eastern States*, 1925. p. 15.

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Yale. Group insurance at Yale university. *School and society*, 29: 81, January 19, 1929.

TEACHERS, STATE AND CITY SYSTEMS

Arkansas. The educators life insurance company. *Journal of Arkansas education*, 6: 18, May 1928.

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Group Insurance California teachers' association. Meeting of the board of directors. *Sierra educational news*, 24: 14, May 1928.

Final session devoted to business. *Illinois teacher*, 17: 181, February 1929.

ILLINOIS STATE TEACHERS ASSOCIATION. Department of research and statistics. A brief study of group insurance. Springfield, Ill., 1931.

Analyzes the interest of teachers in insurance, the economic problems of teachers, meeting economic problems, advantages, disadvantages and growth of group insurance, group insurance experiences of local and state-wide teacher groups, legality and administration of group insurance, term life insurance, and the old-age problem. Reproduces statistical tables of ages of teachers, mortality of teachers, and the actual history of net costs from 1909-1929.

A credit union for Illinois State teachers association. *Springfield, Ill.*, 1931.

Examines the legal nature of teachers' credit unions, outlines their history and growth, defines their purpose and functions, and analyzes some problems which must be faced before 38,000 unacquainted teachers can attempt to organize a state-wide teachers' credit union.

Michigan. Advantages of the newer insurance policies; fifth report of insurance committee of the administrative division of the Detroit teachers association. *Detroit educational bulletin*, 10: 17-18, January 1927.

Existing insurance for Detroit teachers; third report of insurance committee of the administrative division of Detroit teachers' associa-

tion. *Detroit education bulletin*, 10: 10-11, November 1928.

DETROIT TEACHERS' ASSOCIATION. Ninth report. Trends in insurance. *Detroit, Mich., Detroit teachers association*, 1927. p. 18-19. (Detroit educational bulletin, no. 10, May 1927.)

Discusses trends in modern insurance and notes efforts for disability prevention, diversity of insurance, salary saving insurance, and the growth of practically all types of insurance.

Tenth report. Insurance plans of other teachers association. *Detroit, Mich., Detroit teachers association*, 1927. p. 7-8. (Detroit educational bulletin, no. 11, September 1927.)

Discusses the growth of teacher insurance and examines the costs and benefits of the Oklahoma and Missouri plans for teacher group life insurance.

Thirteenth report. Growing interest in teacher insurance. *Detroit, Mich., Detroit teachers association*, 1927. p. 14. (Detroit educational bulletin, no. 11, December 1927.)

Discusses the extent of teacher insurance in the United States, the various types, costs, and benefits of same, suggests a variety of plans in each organization to meet the individual needs of the members, and outlines a model of such a plan.

Fourteenth report. An adequate program of teacher insurance. *Detroit, Mich., Detroit teachers' association*, 1928. p. 12. (Detroit educational bulletin, no. 11, January 1928.)

Describes briefly a 3-way protection insurance plan proposed for Detroit teachers—insurance against death, sickness, accident, and old age. Discusses amounts and methods of paying premiums and explains the amounts and time of benefit payments.

Missouri. MISSOURI STATE TEACHERS' ASSOCIATION. Group insurance plan. *School and community*, 15: 892-93, September 1929.

Nebraska. Group insurance a reality: Plan and policy adopted by Nebraska State teachers association. *Nebraska education journal*, 10: 556-57, November 1930.

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— DELONG, LEO R. Group insurance for Pennsylvania teachers. *Pennsylvania school journal*, 77: 57, December 1928.

— Group life insurance plan. *Pennsylvania school journal*, 77: 482-83, April 1929.

— Why is the Pennsylvania State education association interested in group insurance? *Pennsylvania school journal*, 78: 89-90, October 1929.

South Carolina. Committee report on insurance. *South Carolina education*, 9: 269, May 1928.

— Group disability insurance for members of the South Carolina teachers association. *South Carolina education*, 12: 260, April 1931.

Tennessee. REEVES, A. Group disability insurance. *American teacher*, 15: 12, June 1931.

The method used by the Memphis Teachers Association in the elimination of all technicalities in drafting a contract for group disability insurance so that the contract should have the merit of simplicity—simplicity in its items of protection, and simplicity in the filing and settling of claims.

Utah. Teachers and administration: the teachers welfare committee. *American school board journal*, 78: 118, February 1929.

Discussion by the teachers' welfare committee of the Utah Teachers' Association relative to group insurance with accident and sick benefits.

HEALTH

See also Auxiliary Agencies; Physical Education; Higher Education, Student Finance

HEALTH COSTS

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Health service. *University of Nebraska, extension division. Lincoln, Nebr.*, 1932. p. 142-43. (University of Nebraska publications, educational monograph, no. 3, 1932, 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

ROGERS, JAMES F. Expenditures for school health activities according to sizes of cities. In *School health activities in 1930. Washington, U. S. Government printing office*, 1931. p. 3-5, 11-13, 19-21, 25, 29, 31. (U. S. Office of education. Pamphlet, no. 21, May 1931.)

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COSTS, STATISTICS

[These will be found in the State and city school statistics bulletins of the United States Office of education. See State Statistics; City School Statistics]

HIGHER EDUCATION

See also Junior College; Land-Grant Colleges; Negro Schools; Teacher Training

ACCOUNTING

See also Instruction Costs, Higher Education

CHRISTENSEN, JOHN C. Accounting basis for college and university business administration. In *Association of university and college business officers. Minutes of the second joint meeting, May 1926. Ohio State university, Columbus, Ohio.* p. 18-22.

Discusses the types of data that should be furnished by the accounting system of a college or university, the use of such data to distribute the resources of the institution to the best advantage, and methods for their collection and organization. Describes a general ledger accounting for assets, liabilities, income, and expenditures, and a controlling budget account as the basis of university accounting.

COBB, W. H. Accounting for a university hospital. In *Association of university and college business officials. Minutes of the twentieth annual meeting. University of Colorado. Boulder, Colo.*, 1930. p. 38-43.

Describes how the University of Iowa divides hospital management and operation into two divisions, hospital service as related to the college, and hospital business management and accounting. Analyzes the university hospital costs and classifies budgetary allowances into administration, professional care of patients, X ray pathological chemistry salaries, pathology laboratory, anesthetic department, serology salaries, social service salaries, departmental expenses, maintenance and repair, drugs, contingent expense, replacements, and miscellaneous disbursements.

FRANKE, W. B. College and university accounting. *The journal of accountancy*, 39: 170-81, March 1925.

— Lack of uniformity in college and university accounting. *The journal of accountancy*, 41: 22-32, January 1926.

MOREY, LLOYD. Efforts toward greater uniformity in educational finance reports. In *Association of governing boards of State universities and allied institutions. Proceedings November, 1930. University of North Carolina, Chapel Hill, N. C.*, 1930. p. 82-89.

The limitations automatically set upon the efficiency of a uniform accounting system for institutions of higher learning

by the differences of their educational departments. Some of the common items of major expense are examined and found adaptable to a uniform accounting system. Points out that the national committee on standard reports for institutions of higher learning presents five types of financial reports which may be prepared uniformly by all institutions to facilitate the analysis and comparison of their respective expenditures.

MOREY, LLOYD. University and college accounting. *New York, N. Y., J. Wiley and sons, 1930.* 323 p.

A complete and comprehensive treatment of business and accounting methods in institutions of higher learning. In the main, it is the system in use at the University of Illinois, giving a complete system of blank forms for business and accounting activities.

NATIONAL COMMITTEE ON STANDARD REPORTS FOR INSTITUTIONS OF HIGHER EDUCATION. Suggested forms for financial reports of colleges and universities. *Champaign, Ill., Press of Flanagan-Pearson co., 1931.* 88 p.

Summarises the principles of financial reporting, reproduces and recommends forms and procedures for preparing and presenting balance sheets, statements of fund transactions, statements of current income and expenditures for current purposes. Offers an outline for the classification of expenditures by object.

PLIMPTON, NATHAN C. A practical system for keeping account of endowment funds and other funds for special purposes. Association of University and college business officers, 1923. Appendix A.

PRATT, F. X. Job cost accounting. Association of University and college business officers, 1924. p. 71-72.

SPOUL, R. G. The business administration of university branches. In University and college business officers. Fifteenth annual meeting, 1925. *Iowa City; Iowa, University of Iowa, 1925.* p. 98-112.

Describes the methods of coordinating the accounting systems of the branches of the University of California in detail. Analyzes the accounting problems encountered and the purposes and principles of the existing accounting procedures.

U. S. OFFICE OF EDUCATION. Articulation of accounts and business management. In Survey of public higher education in Oregon. *Washington, U. S. Government printing office, 1931.* p. 189-200. (U. S. Office of education, Bulletin, 1931, no. 8.)

Explains the laws providing for a uniform accounting system in the control of the State institutions of higher learning. Also explains sources of revenue for these schools. Attention is called to the difficulty of maintaining a thorough accounting system, but concludes such accounting is necessary.

WASHBURN, EARLE LEROY. Accounting for universities. *New York, N. Y., Ronald press co., 1926.* 126 p.

WHITLEY, SAMUEL HENRY. Cost accounting in the Commerce State teachers college. *Peabody journal of education, 8: 267-78, March 1931.*

Discusses departmental maintenance, miscellaneous items, and capital investment, departmental instruction, demonstration school instruction and administration as accounting classification used in Commerce State Teachers college, Texas. Lists 15 types of unit costs.

BUDGET

ARNETT, TREVOR. How can the financial needs of a college of one thousand students effectively be met? In *The effective college*, by Robert L. Kelly. *New York, N. Y., Association of American colleges, 1928.* Chapter XXIII.

An outline of the financial needs of a liberal arts college for 1,000 students, the cost of buildings and equipment, instruction, library, administration, current expense, and operation.

COWLING, D. J. An analysis of the financial needs of a college of liberal arts for one thousand students. In *Problems of college education. Minneapolis, University of Minnesota, Edited by Earl Hudelson, 1928.* p. 57-84.

Estimates the financial needs of a democratic, coeducational liberal arts college for 1,000 students. Discusses the desirable standards for such a college, faculty requirements, buildings and equipment needs, summary of endowment, plant and current funds needed, and the annual cost per student.

How much money does a college need? *School and society, 32: 6-10, July 5, 1930.*

Calculates the amounts that should be provided for salaries, administration, libraries, operation and maintenance, and general expenses for a 4-year liberal arts college of 1,000 students. Discusses capital investment needs and sources of income.

ELLIOTT, E. C. Budgetary procedure. In *College and university education. Nashville, Tenn., George Peabody college for teachers, 1931.* p. 79-89.

Advocates monarchical budget control by the president, describes the way that officer may prepare his budget, predicts higher State institutions must take more account of State budget systems, and advocates getting student organizations to budget and report their financial affairs. Illustrates by examples from his own institution, Purdue University.

ENGELHARDT, FRED. Educational policy and budget making. In *Problems of college education. Edited by Earl Hudelson. Minneapolis,*

Minn. University of Minnesota, 1928. p. 49-56.

Defines the relationship between educational efficiency and budget making. Discusses the factual basis for administration, importance of planning, unique characteristics of an educational enterprise, dynamic nature of educational planning, extension of educational services, need of standardization, units of measure, preparation, administration and function of the budget, budgetary limitations, and problems of coordination.

FAE, LUCY E., and GOODING, L. M. College library budgets in the South. *Library Journal*, 54: 750-52, September 15, 1929.

Library budgets, appropriations and expenditures for 1927-28. Analyzes library books and library salary costs per pupil and per faculty member in various sizes of colleges in an attempt to find an attainable standard for library equipment which will enable colleges to budget an adequate sum for this purpose.

HOLLIDAY, F. A. Budgets and their adjustments. In Association of governing boards of State universities and allied institutions. Proceedings, 1927. p. 91-94.

HULL, T. Administration of the budget. In Association of university and college business officers. Minutes of the twenty-first annual meeting, 1931. p. 51-55.

As a description of the process of making the budget at the University of Utah, this article lists the following steps: (1) Consideration of recorded information; (2) estimates of requirements; (3) examination of these estimates; (4) interviews with department heads; (5) actual formulation of the budget; (6) review and adoption by the governing board; (7) execution and recording of data for use in the preparation of future budgets. Explains a method of budget control and accounting.

IRVIN, OSCAR WILLIAM. State budget control of State institutions of higher education. New York, N. Y., Bureau of publications, Teachers College, Columbia University, 1928. (Teachers college, Columbia university. Contributions to education, no. 271.)

Defines, enumerates, discusses, and compares the various type processes of State budgetary procedures of State higher educational institutions in the different States for the years 1919-1926. For brevity and convenience this study uses a group of symbols to express a series of ideas, offering greater possibilities of manipulation and comparison.

KELLY, F. J. Adequate cost analysis as a basis for budget making. *Journal of educational research*, 7: 410-20, May 1923.

KELLY, R. L. The college or university budget. In Higher education in America, by Raymond A. Kent. New

York, N. Y., Ginn and co., 1930. p. 633-51.

Outlines the necessity for a complete university budget. Gives various items of budget making and procedure. Lists the elements of basic unit costs as average size of classes, average teacher load, and average salaries of teachers. Includes facsimile requisition blanks of the University of Minnesota.

MOREY, LLOYD. Analysis of university expenditures. In University and college business officers. Fifteenth annual meeting, 1925. *Iowa City University of Iowa*, 1925. p. 113-38.

Discusses three purposes for analyzing university expenditures; first, to satisfy the public; second, to satisfy State legislatures; and third, more accurately to inform institutions concerning the costs of various operations. Applies principles of making a university budget, and interprets the significance of costs.

PHILLIPS, J. D. Budgetary control by dally charts. In Association of university and college business officials. Minutes of the eighteenth annual meeting, 1928. *University of Minnesota, Minneapolis, Minn.* 1928. p. 43-49.

A series of 12 charts showing unencumbered balances for salaries, wages, and business items in the general operation fund; unencumbered balances in specific legislative appropriations; and unencumbered balances in revolving funds. Suggests that these charts and directions be used as guides to budgetary planning and control.

Budget flexibility. In Association of university and college business officials. Minutes of the twentieth annual meeting, 1930. *University of Colorado, Boulder, Colo.*, 1930. p. 28-33.

Describes the methods and advantages of modifying the school budget to meet changing conditions. Recommends that lump-sum appropriations for general purposes, adequate unassigned funds to meet contingencies, a continuous resurvey to discover funds not needed for the purposes originally indicated, and periodic reports showing the use being made of flexible features of the budget, for the purpose of securing, utilizing, and protecting the advantages of a flexible budget.

SMITH, FAY E. Preparation of the budget. In Association of university and college business officials. Minutes of the twenty-first meeting, 1931. p. 47-50.

Describes processes and authority for making the budget in the University of Wyoming. Considers "essential" and "desirable" expenditures as basis for allocation of funds. Explains the process of estimation by which the budget is drafted.

SMITH, SHIRLEY W. The making of a university budget. In Association of university and college business officers. Proceedings, 1925. p. 50-63.

WELLS, R. T. How shall a scientific and adequate budget for a teachers college be determined and secured in 1950? *Washington, D. C., National education association, 1929.* p. 928-34. (National education association. Proceedings Vol. 67, 1929.)

A study of the construction, operation, and maintenance costs of teachers colleges. Examines library and faculty expenses, and discusses methods of taxation, need for cooperation among States in collection of taxes, and tax legislation.

BUDGET, FOREIGN

Germany. Budgets of German universities. *School and society*, 19: 695-96, June 14, 1924.

BUSINESS MANAGEMENT

ANTHONY, A. W. Annuity agreements among colleges. *Association of American colleges bulletin. In Proceedings, 1930.* Vol. 16. p. 473-76.

Analyzes the conditions and considerations upon which a college may profitably administer personal annuities. Examines the costs and legal complications involved and the taxation of annuities.

BALL, RAYMOND N. The segregation of investments for special funds. *Association of university and college business officers of Eastern States, 1925.* Appendix F.

BENEDICT, H. Y. Horse sense and common honesty in spending college funds. *Texas outlook*, 13:16, May 1929.

EDGEWORTH, H. C. Dormitories, financing and operation. *In Minutes of second joint meeting of the association of university and college business officers, May 12-22, 1928.* *Ohio State university, Columbus, Ohio, 1928.* p. 23-28.

Considers that dormitories should earn a reasonable return on their money investment, and defends the construction of dormitories as a legitimate investment of endowment funds if they yield a reasonable return, if depreciation is adequately accounted for, and the proportion of the fund invested in this manner is not excessive. Gives building, equipment, and operation costs and discusses methods of estimating and administering rentals.

ELLIOTT, E. C. The work of the educational finance inquiry commission. *In Transactions and proceedings of the national association of State universities, 1923.* p. 97-106.

FRASIER, GEORGE W. Experiments in teachers college administration; VII An adventure in cooperation. *Educational administration and supervision*, 14: 184-88, February 1929.

ILLINOIS STATE UNIVERSITY. The business methods of the university of Illinois; showing how the university does business. *Urbana, Ill., Illinois State University, 1925.* Unpublished. (University of Illinois. Bulletin, vol. 22, no. 20, January 12, 1925.)

KELLEY, R. L. College development programs. p. 367-418. (Association of American colleges. Bulletin, vol. 16, 1930.)

Reproduces the itemized plans and costs of various 10, 15, and 20 year development programs which have been formulated by colleges of various types and sizes. Due to their concise, specific, and detailed form, these plans should prove constructively suggestive to administrators.

MCCAFFREY, M. E. Administration of trust funds and bequests to universities. *Association of university and college business officers, 1924.* p. 11-48.

MCNEELY, JOHN H. Business management and finance. *Journal of higher education*, 2: 487-92, December 1931.

The findings of the land-grant survey staff in regard to business management and finance in the 69 land-grant institutions are summarized in this article. The extent of the practice as well as the disadvantages of intermingling the educational and business functions are shown.

MILLER, WILLIAM O. The business administration of an effective college. *In The effective college*, by Kelly, Robert L. Chapter XXIV. *New York, N. Y., Association of American colleges, 1928.*

Discusses need for continuous research, selection of staff, assignment of duties, and methods of securing cooperation and enthusiasm of the staff, in this part of the book, as the most essential elements of the business administration of a college.

Oregon. CHAMBERS, M. M. State administration of education. *Journal of higher education*, 1: 203-7, April 1930.

Explains the purposes of consolidating State control of higher education in Oregon. Describes process of abolishing boards of control for separate institutions and creating one central board of control which governs all State institutions of higher education and apportions funds.

REMSEY, D. S. Contingent endowment funds. *In Association of American colleges bulletin*, vol. 16, 1930. p. 477-82.

Describes a document designed to aid college presidents in securing gifts from wealthy individuals for the purpose of building up capital funds. Considers some legal phases of the document and such transactions.

RIES, LESTER S. Building maintenance and operation. *In* Association of university and college business officers. Minutes of the eleventh annual meeting, 1930. p. 28-34. (Held at Easton, Pa.)

The superintendent of buildings outlines the maintenance and operation program at the University of Chicago. An assistant superintendent in charge of maintenance, one in charge of operation and a chief draftsman assist the superintendent. Includes a discussion of the supervision of janitors and methods of performing operation and maintenance tasks.

RUSSELL, JOHN DALE. Efficiency in college management. Unpublished Doctor's thesis, Indiana university, 1931. p. 61-81; 168-94.

SMITH, SHIRLEY W. Equity in compensation of employees doing similar work under differing circumstances. *In* Association of universities and college business officers. Minutes of the twentieth annual meeting. *University of Colorado. Boulder, Colo.*, 1930. p. 25-27.

Outlines the need for an equitable division of labor among the clerical, stenographic, and semiadministrative workers of a university staff. Discusses principles of personnel, administration, and the effects of injustice.

TABB, B. W. The segregation of investment for special funds. Association of university and college business officers of Eastern States, 1925. Appendix N.

U. S. OFFICE OF EDUCATION. Business management and finance. *In* Survey of land-grant colleges and universities. *Washington, U. S. Government printing office*, 1930. (U. S. Office of education. Bulletin, 1930, no. 9, vol. 1, part III.)

Business management of schools in Arkansas. Survey of state-supported institutions of higher learning in Arkansas. *Washington, U. S. Government printing office*, 1931. p. 86-108. (U. S. Office of education. Bulletin, 1931, no. 6.)

This chapter discusses the business management of various institutions of higher education in Arkansas and points out their low general average of business efficiency. Includes the need for centralization, adequate budgets, budget control, and uniformity of fees in the recommendations.

Coordination of capital investment. *In* Survey of public higher education in Oregon. *Washington, U. S. Government printing office*, 1931. p. 201-14. (U. S. Office of education. Bulletin, 1931, no. 8.)

COSTS

See also Instruction Costs. Higher Education; Junior College Costs; Teacher Training Costs

BISHOP, W. W. In aid of college libraries. *Library journal*, 55: 445-48, May 15, 1930.

Building construction in the universities, colleges, and schools of the country. *School and society*, 33: 264-65, February 21, 1931.

Report of a survey which reveals that 81 institutions of higher learning plan the expenditure of more than \$98,000,000 for building construction during 1931. Investigation reveals that elementary and secondary schools will spend more than \$208,000,000 for the same purpose during 1931.

CALIFORNIA TAXPAYERS' ASSOCIATION. Report on the University of California. An analysis of the growth of the university from 1918 to 1929, and of the unit cost of instruction during the fall and spring semesters, 1928-1929. *Los Angeles, Calif.*, The association, 1931. p. 25-52. (Reports, no. 38, pt. 2.)

Research department. University of California; growth and unit cost analyzed. *Tax digest*, 9: 122-25, April, 1931.

Clock hour costs at the University of Pennsylvania. *School and society*, 19: 126-27, February 2, 1924.

Cost of a four-year college course. *School and society*, 26: 647, November 19, 1927.

Shows that the total expense of giving a 4-year college course at Ohio State university is approximately \$4,000 per student. Students pay an average of \$2,632, or about three-fourths of the cost personally, and the State one-fourth. An analysis of the total university expenditures reveals a distribution of 63.9 per cent being spent for instruction, 13.4 per cent for capital outlay, 12.4 per cent for operation, 3.8 per cent for administration, and 3.6 per cent for libraries.

Cost of college textbooks. *School and society*, 31: 145-46, February 1, 1930.

Cost of higher education. *School and society*, 25: 492-94, April 23, 1927.

Costs in higher education. *School and society*, 28: 197-98, August 13, 1927.

CUTNER, IRVING S. Cost of medical training. *In* Higher education in America. Edited by Raymond C. Kent. *Boston, Mass., Ginn and co.*, 1930. p. 326-28 (table p. 346).

Points out that the cost of medical training has more than doubled since 1910 and budgets have risen enormously. The budgets of several schools divided by the number of undergraduate students show a cost per student in excess of

- \$1,500. A table shows fees in certain colleges. The average fee per student in all colleges is \$202.
- Education below cost; a specific instance. What the colleges are doing. 27:5-6, January 1928.
- Expenditures of State higher institutions. *School life*, 12:67, December 1926.
- Expenditures of State universities and colleges. *School and society*, 25:505, April 30, 1927.
- FORD, HORACE S. Unit educational costs. In University and college business officials 15th annual meeting, 1925. *Iowa City, Iowa, University of Iowa*, 1925. p. 138-50.
- GREENLEAF, W. J. Expenditures of State universities and State colleges, 1924-25. *Washington, U. S. Government printing office*, 1926. (U. S. Office of education. Higher education circular, no. 82, September 1926.)
- Land-grant colleges and universities, 1928. *Washington, U. S. Government printing office*, 1929. (U. S. Office of education. Bulletin, 1929, no. 13.)
- The cost of going to college in institutions under private nonsectarian control. *Washington, U. S. Office of education*, 1929. 6 p. (mimeographed.)
- HUDELSON, EARL. Class size at the college level. *Minneapolis, Minn., University of Minnesota press*, 1929. 299 p.
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STATISTICS

[Finance statistics in this field are to be sought in the bulletins of the United States Office of Education on Universities, Colleges, and Professional Schools; Land-Grant Colleges and Universities; and Statistics of Teachers Colleges and Normal Schools. The latest in print, the years covered being in parenthesis, are respectively: Bulletin, 1929, No. 38 (1927-28); Bulletin 1930, No. 28 (1929); Bulletin 1929, No. 14 (1927-28). Bulletins for the earlier years can be located through the list of educational publications of the United States Office of Education at Washington or by looking up the heads of Higher Education, Agricultural and Mechanical Colleges, and Teacher Training Institutions in Carter Alexander's *Educational Research*, third edition, 1931. The statistics include such items as benefactions, value of different kinds of property, receipts classified by source, and classified expenditures for the land-grant colleges and teacher training institutions. Data are further classified by public and private institutions, by States and by individual schools. In addition the United States Office of Education collects data on income, attendance, salaries, and legislative budget requests for State colleges and universities in the odd-numbered years and for State teacher-training institutions in the even-numbered years. These data are issued in mimeographed circulars]

STUDENT FINANCE

See also Higher Education, Scholarships; Higher Education, Tuition

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versity, summer session, *School and society*, 25: 203, February 12, 1927.

A study of the expense of 122 women attending summer school. Shows total costs ranging from \$123 to \$379, with a median of \$231. Calculates a hypothetical average student would spend \$76 for tuition, \$107 for room, board, and laundry, and \$45 for miscellaneous expenses.

— The cost of going to college. *Teachers college record*, 27: 129-41, October 1925.

ARNETT, TREVOR. Who should pay the costs of higher education? Association of university and college business officials of the Eastern States, 1926.

Recommends that students who can afford to pay be charged the entire cost of a college education and that the State make some provision to support the less wealthy students who have ability to profit by collegiate education.

ASSOCIATION OF UNIVERSITY AND COLLEGE BUSINESS OFFICERS OF EASTERN STATES. Data on and discussion of loan funds. *Association of university and college business officers of Eastern States*, 1928. p. 81-110.

— Digest of study of student loans. Association of university and college business officers of Eastern States, 1925. Appendix A.

AYDELOTTE, FRANK. Opportunities and dangers of educational foundations. In Association of American universities. Journal of proceedings and addresses of the twenty-seventh annual conference, 1925. *Chicago, Ill., University of Chicago press*, 1925. p. 60-64.

An appraisal of the value of educational foundations in terms of what they do, by the President of Swarthmore college. Declares that all fellowships must meet some educational need before they can justify themselves socially and points out that a flexible system of awards is the most essential factor in the effective administration of educational foundations.

BRADY, MARY B. How students can borrow money with character as security. *Independent*, 112: 6, January 5, 1924.

Discusses the work of the Harmon foundation, New York city, which grants loans to groups of selected students in properly qualified colleges.

— Outline of student loan plan of the Harmon foundation. *Association of university and college business officers*, 1928. p. 29-31.

— Student loans. In Association of university and college business officers. Minutes of second joint meet-

ing, 1928. *Columbus, Ohio, Ohio State University*, 1928. p. 29-31.

The acting director of the Harmon Foundation discusses four principles governing the administration of student loans: (1) a careful selection of risks through affiliated colleges; (2) the installment form of repayment; (3) the group guarantee; and (4) a strict follow-up.

CARLSON, T. O. Audit and control of finances of student organizations. *Association of university and college business officers*, 1924. p. 49-54.

CHAMBERS, M. M. Students: Admissions and fees. *Journal of higher education*, 3:133-38. March 1932.

Court decisions in cases in which students have questioned the right of the State university to restrict their activities in relation to admission, fraternity membership, and fees.

CHASSE, L. J. A study of student loans and their relation to higher education finance. In *Association of university and college business officers*. Fifteenth annual meeting, 1925. *Iowa City, University of Iowa*, 1925. p. 14-23.

Discusses need of more attention to student loans, the present method of administration and how such loans should be administered, presents four guiding principles for the selection of students to whom loans are to be made, and outlines five activities which student loan organization should maintain to assure the most efficient use of student loan funds.

DAVIS, HARVEY NATHANIEL. College finances. *Bulletin of the American association of university professors*, 15: 365-71, May 1929.

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Sliding scale tuitions. *Association American colleges bulletin*, 15: 279-84. May 1929.

Recommends the distribution of endowment funds to students in proportion to their ability as a device for attracting the highest type of students to an institution, of creating a spirit of academic vigor, and for spending endowment funds where they will pay the greatest dividends.

DOROUGH, AUGUSTUS B. How students work their way through college. *Nashville, Tenn., Ooksbury press*, 1929. 133 p.

A collection of articles by various educators, showing statistics and values of various methods by which students work their way through college.

Earnings of students in land-grant colleges. *School and society*, 23: 126-27, January 24, 1931.

EARNSHAW, E. B. The support of student activities. *Association of university and college business officers of the Eastern States*, 1925. Appendix I.

ELLIOT, ROY W. Credit and collection methods for the small college. In *Association of university and college business officers*. Minutes of the twentieth meeting. *Boulder, Colo., University of Colorado*, 1930. p. 43-46.

Compares loans and scholarship funds versus deferred tuition payments as desirable methods of assisting students finance a college education. Describes methods of administering the deferred payment plan at the University of Wichita. Considers the deferred payment plan an outgrowth of economic conditions and in keeping with sound business procedures.

Deferred payments of tuition and methods of handling. In *Association of university and college business officers*. Minutes of the eighteenth annual meeting, 1928. *Minneapolis, University of Minnesota*, 1928. p. 54-55.

A description of the methods used by the University of Wichita for granting students the privilege of deferred tuition payments. Includes the personal investigations, records, and follow-up methods.

FORSYTH, C. H. What it costs to-day to go to college. *School and society*, 19: 44-45, January 12, 1924. table.

A comparison of the costs of attending the University of Illinois in 1908-9 and Dartmouth College in 1922-23, etc.

GILMAN, MARGARET. Financing a college education. *Savings bank journal*, 11: 23-24, 53, March 1930.

GREENLEAF, W. J. Annual student expenses in State colleges and universities. *Washington, U. S. Office of education*, 1928. 6 p. Mimeographed.

Self-help for college students. *Washington, U. S. Government printing office*, 1929. 136 p. (U. S. Office of education. *Bulletin*, 1929, no. 2.)

Gives minimum average yearly expenses for tuition, fees, board and room at various classes of institutions. Details on student loan funds at many individual institutions. Description of self-help possible through various activities with a wealth of practical details and tabulation of extent of self-help at many individual institutions. Directory of higher education institutions of the United States with brief notes on amounts of tuition fees, living and minimum expenses and opportunities for self-help.

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- HARMON, WM. E.** Loans to college students. Association of university and college business officers of eastern States, 1924. Appendix D.
- HOLST, J. H.** The imposition of fees in State-supported institutions. *Educational review*, 65: 35-39, January 1923.
- LELAND, R. G.** The costs of medical education: Students' expenditures. Chicago, Ill., American medical association, 1931.
- LIMBERT, PAUL M.** Finance. In *Denominational policy in the support and supervision of higher education*. New York, N. Y., Bureau of publications, Teachers college, Columbia university, 1929. Chapters VI, VII. (Teachers college, Columbia university. Contributions to education, no. 378.)
Investigates the purpose and powers of denominational boards of education. Examines religious, educational, and financial policies. Chapters 6 and 7 discuss methods and policies of securing and distributing aid found in various denominational colleges.
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- MOREY, LLOYD and SMITH, V. H.** Student fees in State Universities. In *Association of university and college business officers. Minutes of the eighteenth annual meeting, 1928. Minneapolis, University of Minnesota, 1928.* p. 19-25, 26-27.
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Collected data for, 1923-24, by questionnaires from students of 53 colleges and universities selected at random from 549 liberal arts colleges in the United States. Investigated the social and economic status of college students, parental occupations, parental incomes, parental schooling, nativity, and descent of students, size of families, self-support among students, student residence, and nature of student affiliations.
- SHEEHY, MAURICE STEPHEN.** College student and money. *Commonweal*, 14: 177-79, June 17, 1931.
- SMITH, GEORGE HERBERT.** Undergraduate and graft. *School executives magazine*, 50: 264-66, February 1931.
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- SUNDWALL, JOHN.** Financing student health service. In *Higher education in America*. Edited by Raymond C. Kent. Boston, Mass., Ginn and co., 1930. p. 548-49.
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- TAYLOR, H. E.** Coordinating business enterprises with the educational program. In *Association of university and college business officers. Minutes of the twentieth annual meeting, 1930. Boulder, Colo., University of Colorado, 1930.* p. 33-37.
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University. The university and the State; a comparative study of the support of American State universities. *Athens, Ga.* 1926. 24 p. incl. diagrs. tables. (Bulletin of the University of Georgia; vol xxvi, no. 2a, February 1926.)

WELLS, GUY H. Is Georgia adequately supporting her higher institutions of learning? *Georgia education journal*, 21: 17-19, March 1929.

GREENLEAF, W. J. Financial support of colleges. *Journal of higher education*, 1: 254-60; May 1930.

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THOMAS, JOHN M. Why State support of higher education? *New Jersey Journal of education*, 18:4-5, 9, December 1928.

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LEONARD, R. J., EYENDER, E. S., and O'REAR, F. B. Survey of higher education for the United Lutheran Church in America. With the cooperation of other members of the staff and graduate students. *New York city, Bureau of publications, Teachers college, Columbia university, 1929, 3 v. tables.*

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New Jersey. UPDEGRAFF, HARLAN. Report of the commission to survey public education, Trenton, N. J., 1930. p. 168-70, 187.

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- TUITION**
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- ARNETT, TREVOR. To what extent should college students pay the cost of education? *Association of university and college business officers of Eastern States*, 1927. p. 18-29.
- CHAMBERS, M. M. Students: Admissions and fees. *Journal of higher education*, 3: 133-38. March 1932.
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- Traces trends by 5-year intervals from 1910 to 1926 for relation of tuition paid to the cost of the college education for 109 privately controlled and 47 publicly controlled colleges. Classifies institutions in various ways. Conclusions similar to those of the later Cowen study which see. Bibliography of 35 unannotated items.
- College tuition trends. *School and society*, 33: 737-40, May 30, 1931.
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- ELLIOTT, E. C. Sources of financial support in higher education. In College and university education. Nashville, Tenn., *George Peabody college for teachers*, 1931. p. 38-49.
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- HAMMOND, T. M. Educational problems in college and university; student fees and tuition charges. *Ann Arbor, Mich., University of Michigan*, 1921. p. 286-96.
- LINDSEY, E. E. and HOLAND, E. O. Student fees. In his College and university administration, 1930. p. 40, 51-52, 55, 56, 64-69
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- THURBER, C. H. The fee system of State universities. In National association of State universities. Proceedings, 1923. Vol. 21. p. 38-54.
- UNIVERSITY OF ALABAMA INDEX. Report of special committee on the matter of out-of-State student fees. University, Ala., 1931. 15 p. (University of Alabama Index, vol. 14, no. 5, March 1, 1931.)
- A well-conducted study of whether the institution's 1,300 such students cost the State of Alabama anything. Covers teachers' salaries, other expense, equipment, and buildings and concludes that these students paid more tuition than the State paid for them.
- HIGH SCHOOL**
- See Secondary Education, Costs, High School
- HIGHWAY COSTS**
- [Statistics for highway finance appear regularly in the standard Cost of Government series of the National Industrial Confer-

ence Board. The latest, issued in 1931, covers the latest previous years feasible for the various items. Figures in amounts and percentages for expenditures, income, receipts from various taxes, bond issues, Federal Government, States, and local areas. Important figures for several previous years. Sources indicated. Research bulletins of the National Education Association often give valuable highway costs compared with education costs, traceable through the index at the end of each volume.]

HOME ECONOMICS

See also Vocational Education

ALEXANDER, NELLIE. How schools can afford home economics. *Elementary school journal*, 25: 113, October 1924.

DONNELLY, ALICE M. Some economies which have been effected in administration of home economics in public schools of Ohio. Educational research bulletin (Ohio State university), 4: 272-73, 1925.

DYER, ANNIE R. Administration of home economics in city schools. *New York, N. Y., Teachers college, Columbia university*, 1928. p. 77-115. (Teachers college, Columbia university. Contributions to education, no. 318.)

A study of the prevailing practices of financing home economics including suggestions for more desirable methods. Discusses the preparation of home economic budgets, the purchase of supplies, per pupil costs, bases for selecting equipment, home economic libraries, and the utilization of home economics rooms.

WHITCOMB, EMELINE S. Trends in home economics education, 1926-28. *Washington, U. S. Government printing office*, 1929. p. 20-21. (U. S. office of education. Bulletin, 1929, no. 25.)

Accounts for the expenditures of money granted by the Federal Government under various acts for the support of home economics. Covers curriculum reconstructions, health education, parental education, family relationships, and home economics programs for boys, men, and women.

WINCHELL, COBA M. Home economics for public-school administrators. *New York, Bureau of publications, Teachers college, Columbia university*, 1931. 151 p.

Per-pupil costs for different classes of work at different levels (p. 86-89). Cost of equipment for departments and for items for several cities with similar estimates for equipments of varying elaborateness from New York State department of education. (p. 113-20).

HOUSEHOLD ARTS

See Home Economics.

INCOME

GENERAL

For Income Tax *see* Taxes, Income.

BRADY, ROBERT A. The money we spend. *The survey*, 64: 505-7, September 15, 1930.

After asking just what human values are expressed by our industrial progress, this article critically examines Doctor King's study of incomes in the United States, and points out that more than 80 per cent of the population including teachers, does not yet receive an income that will provide the minimums of decency and comfort set up by the National Industrial Conference Board.

CARR, W. G. School costs and income in California. *Sierra educational news*, 25: 35, September 1929.

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Discusses methods by which a school district may control its income by accounting techniques. Explains with forms and graphs control of income from State aid, temporary loans, monthly demands for cash, accounting for revenues in small school districts, and principles to be considered in borrowing.

ENGELHARDT, N. L. and ENGELHARDT, FRED. Administrative and accounting control of income in local school systems. *Teachers college record*, 28: 261-82, November 1926.

A general treatment of the administrative and accounting control of income in local school systems. Discusses fiscal dependence and income control; laws and income control, control of income from State aid, allocation of State aid, tax collection and income control, budget estimates of tax income and receipts, monthly demands for cash, interest rates, temporary loans, cash reserves, transfers between funds, protection of resources against risk, bonding school officials, and the protection of funds in depositories.

STATISTICS, GENERAL

[The best sources are the publications of the National bureau of economic research, New York City, and the research bulletins of the National education association. Of the former, the latest volume, National income and its purchasing power, by W. I. King and L. Epstein, 1930 cites previous studies. Figures in the latter may be located through the indexes issued with the last number of each year. For example, volume 8, no. 4 (September 1930) gives the estimated income of States in 1928. Both series give sources of data.]

EPSTEIN, LILLIAN and KING, WILLFORD I. The national income and its purchasing power. *New York, N. Y., National bureau of economic research*, 1930. 394 p.

Brings forward the former income studies of the National Bureau of Eco-

conomic Research. Reports total realized income and its purchasing power in 1913 dollars, and for the years 1909-1928. Gives special attention to the shares in the national incomes of various population groups and to the portion derived from corporations in each of the leading fields of industry.

STATISTICS, SCHOOL

[These will be found in the State and city school statistics bulletins of the U. S. Office of education. See State Statistics; City School Statistics. The Financial Statistics of Cities (latest in print, 1928) and Financial Statistics of States (latest in print, 1929) series of the U. S. Bureau of the Census contain valuable school income figures]

INDEX NUMBERS

See also Costs, Methods of Calculating; Research Techniques

BURNS, R. L. Index of cost. In Measurement of the need for transporting pupils. *New York, N. Y., Teachers college, Columbia university, 1927.* 61 p. (Teachers college, Columbia university, Contributions to education, no. 289.)

CLARK, H. F. Index numbers in education work. *Teachers college record*, 30: 453-56, February 1929.

Defines the needs and advantages of the development and use of index numbers, reviews past use of index numbers, cites uses of index numbers in other fields and suggests valuable possibilities for their use in future educational work.

Index numbers in school administration. *Bloomington, Ind., Indiana university, 1927.* (Indiana university. School of education. Bulletin, vol. 8, no. 3, 1927.)

Discusses need, purpose, methods of construction, and use of price indices of school bonds, buildings, and supplies.

Index numbers of costs in education. *Teachers college record*, 30: 578, 681, 794, March, May 1929.

Presents three charts tabulating the monthly indexes of cost of living of teachers, price of school buildings, price of school bonds, and the price of instructional supplies.

Index of school bond prices. *American school board journal*, 76: 185-86, January 1928.

A series of monthly articles continuous from January, 1928, to December, 1931, now temporarily suspended, giving the trend of school bond prices. The school bond index representing the net yield of school bonds of various States during the various months, a comparison by months and years. A discussion of rates of interest and tables of comparison for I. Average yield of all school bonds sold during current months; II. Amounts and yields of bond issues; III. Bond sales, schools, municipal, all public and private, average rate bonds were sold during year (municipal); IV. Aver-

age yield of long term Federal Government bonds; V. Security prices; VI. Revised index number of wholesale prices.

and BUIROS, O. K. School building index. See Monthly numbers of *School executives magazine* in 1930.

and FOWLKES, J. G. Index of school building and school supply prices. See monthly numbers of *Nation's schools* up to June 1930.

and others. Index of teachers salaries. *Journal of the National education association*, 18: 170, May 1929. Also published in *School and society*, 29: 603-4, May 11, 1929.

HARRY, D. P. Cost of living of teachers in New York State. *New York, N. Y., Teachers college, Columbia university, 1928.* 184 p. (Teachers college, Columbia university. Contributions to education, no. 320.)

Devises a method for measuring the cost of living in various localities and an index of the cost of living and recommends that cost of living be considered in the construction of equalization programs. Shows that in New York State the index can safely be based upon food and rent only.

NATIONAL INDUSTRIAL CONFERENCE BOARD. The cost of living in the United States, 1914-1930. *New York, N. Y., National industrial conference board, 1931.* 170 p.

Continuation of this standard series whose previous numbers are noted in the introduction. Gives general index and subindexes for component parts for every year 1914 to 1930 using 1923 as a base of 100. Appendix gives all indexes for 1930 on base of 1914 as 100, to tie to previous data on that base. Full explanation of theory, sources of data, and methods of computation.

NORTON, JOHN K. The ability of the States to support education. *Research bulletin, National education association*, vol. 4, nos. 1 and 2. January-March 1926. 85 p.

Develops a valuable form of index which relates the standing of each State or any item to the average of the United States considered as 100.

PHILLIPS, FRANK M. Educational rank of the States, 1930. *American school board journal*, 84: 25-29, February 1932. 84: 37-39, March 1931.

A series not yet completed in March, ranking the States by indexes on the Ayres and Phillips methods, both of which include finance items, for various years. Each index gives rank on total and on each financial item. The two methods differ on the financial items included and the Phillips procedure takes into account the changing value of the dollar. References to publications giving these indexes in previous years.

U. S. DEPARTMENT OF COMMERCE. Statistical abstract of the United States. 1931. *Washington, U. S. Government printing office*, 1931. p. 355-58.

Employment and pay-roll indexes in manufacturing industries.

INDIAN SCHOOL COSTS

[The best sources of data on Indian School costs are, the annual reports of the "Hearings on the Interior Department Appropriation Bills" before the Congressional subcommittees of the committees on appropriations, the Interior Department Appropriation Bills, and the reports of the Commissioner of Indian Affairs. Other valuable sources of data are a series of reports on "Hearings before a Subcommittee of the Committee on Indian Affairs of the United States Senate (at present incomplete) and reports to the United States, Committee on Indian Affairs, on 'Nontaxable Indian Land' the first of which appeared in 1931.]

U. S. OFFICE OF EDUCATION. Government Indian schools cost per pupil. In Statistical summary. *Washington, U. S. Government printing office*, 1930. Table 2. p. 3. (U. S. Office of education. Bulletin, 1930, no. 3.)

Similar figures for previous years in corresponding bulletins.

INDUSTRIAL EDUCATION COSTS

See also Vocational Education

Buffalo. U. S. OFFICE OF EDUCATION. Industrial education section of the survey of the Buffalo public schools. *Washington, U. S. Government printing office*, 1931. 34 p. (U. S. Office of education. Pamphlet, 1931, no. 17.)

Discusses the pioneer work of the Buffalo public schools in developing training courses with a trade vocational objective. Calls attention to State law requiring that minors temporarily unemployed must attend continuation school 20 hours a week, but points out inadequate facilities for such attendance. Includes tabular data on salaries of administration and instructional staff and shows sources of income and amount expended by city of Buffalo on vocational education.

CHALLMAN, S. A. Rooms and equipment for industrial arts. *American school board journal*, 48: 71-75, 132, 135, January 1924.

PAUL, C. E. Per capita costs. *Industrial education magazine*, 29, 432, June 1928.

An editorial commenting upon per capita costs in administration connected with school instruction in the manual arts. As a first contribution to the discussion a letter is quoted advocating pupil assistants in the teaching of manual arts.

Pennsylvania. Department of public instruction. Shop equipment for vocational all-day trade and industrial schools. *Harrisburg, Pa., State publishing house*, 1925. 25 p. (Pennsylvania. Department of public instruction. Bulletin, 1925, no. 10)

Per capita cost of part-time instruction. *Industrial education magazine*, 26: 31, August 1924.

PHILLIPS, FRANK M. Industrial schools for delinquents—cost per pupil. In Statistical summary. *Washington, U. S. Government printing office*, 1930. p. 8. (U. S. Office of education. Bulletin, 1930, no. 3.)

PROFFITT, MARIS M. Private and endowed schools offering trade and industrial courses. *Washington, U. S. Government printing office*, 1928. 50 p. (U. S. Office of education. Bulletin, 1928, no. 18.)

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INSTRUCTION COSTS

See also Class Size; Teaching Load

GENERAL

BROADY, KNUTE O. School provisions for individual differences. *New York, N. Y., Teachers college, Columbia university*, 1930. p. 98-101. (Teachers college, Columbia university. Contributions to education, no. 396.)

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CROSSMAN, G. W. An experiment in instructional saving. *American school board journal*, 82: 41, April 1931.

How a fast section of beginning algebra for boys saved the teaching time of one semester in geometry in Grand Forks, N. Dak.

EVANS, F. O. Teachers load and the school budget. *Tax digest*, 8: 206, June 1930.

Discusses the responsibility of school boards as trustees of public funds and

instructional expense as the major factor of school costs. Examines the relationship of school size to costs and devises a technique for determining teacher-load costs. Suggests reductions of school expenditures.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter V. Instructional service. *University of Nebraska, extension division, Lincoln, Nebr.* 1932. p. 59-88, 177-79. (University of Nebraska publications, educational monograph, no. 3, 1932. p. 212.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

LAMBERT, A. C. Instruction and plant operation as constant costs. *American school board journal*, 80: 42. April 1930.

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RUCH, G. M. and HOLY, T. C. Efficiency of training as affected by the cost of instruction. *In National society for the study of education. Twenty-seventh yearbook*, 1928. Pt. 2, p. 125-28.

By using school costs as computed by dividing current expenditures by average daily attendance, the Thorndike Intelligence Examination for High-School Graduates, The Iowa High School Content Examination, and the composite marks of high-school graduates earned during the first semester of the year 1923-24 at the State university of Iowa, as measures, this article attempts to find the relationships between the cost and efficiency of instruction. Finds no measurable relationship.

SCOTT, CECIL W. Economies in public-school expenditures for instruction. *American school board journal*, 84: 39-40, 50-51, February-March 1932.

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WETZEL, WILLIAM A. How to maintain a program of individual instruction in the face of shrinking school budgets—Abstract. *In National education association. Department of superintendence, official report*, 1932. Washington, D. C., February 1932. p. 253-54.

WILEY, GEORGE M. Instructional school costs in cities and villages of New York state. *Albany, New York, University of State of New York.* 1925. 24 p. (University of State of New York. Bulletin, no. 834.)

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HIGH SCHOOL

See also Vocational Education Costs

California. **WINDES, E. E.** Trends in the development of secondary education. *Washington, U. S. Government printing office*, 1927. (Table 12.) (U. S. Office of education. Bulletin, 1927, no. 28.)

Tabulates and classifies teaching costs per credit unit for 19 secondary school subjects according to size of enrollments from data obtained from a report of a committee of 15 California high-school principals. Briefly explains the statistics.

Chicago. **HENRY, D. R.** A statistical comparison of the student hour costs of instruction in twenty-two Chicago high schools. *School review*, 34: 365-71, May 1926. 34: 455-66, June 1926.

CHURCH, E. E. Factors determining high-school teaching costs. *High-school teacher*, 2: 52, 57, February 1926.

Studies subject teaching costs and number of pupil periods in each subject in 58 West Virginia high schools. Shows that there is a wide range in the cost of high-school subjects and that science teaching costs are high. Concludes that the most efficient instruction is found in schools with enrollment between 200 and 500, that the high schools have sufficient teachers, and that size of classes and teachers' salaries are the two chief factors determining cost.

Cleveland. **BUREAU OF STATISTICS AND CHILD ACCOUNTING.** An analysis of the expenditures for high-school teachers' salaries, subject taught basis, 1928-29. *Cleveland senior high schools. Cleveland, Ohio, Board of education*, 1929.

— Cost of education. *In The senior high school. Report of the superintendent of schools to the board of education of the city school district of the city of Cleveland*, 1928-29. *Cleveland, Ohio, Board of education*, 1930, p. 240-45.

Teachers' salary costs per period and per pupil for five periods per week for the year for various high-school subjects; itemized yearly per pupil costs for non-classroom activities; and diploma costs to the taxpayer for a girl graduating

- from an academic course, a boy from a commercial course, and one from a commercial course for the year 1928-29 for the whole city.
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- GARVER, V. A. Unit costs of instruction in the high school. *High school teacher*, 2: 312-14, October 1926.
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- Iowa. CROSS, H. A. Teacher cost per pupil for subjects taught in Iowa high schools. Masters thesis, 1926. University of Iowa. Iowa City.
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- Massachusetts. HOOD, J. T. A study of costs of instruction in Massachusetts high schools of less than 200 pupil enrollment. *Boston, Mass., Boston university*, June 1928. (School of education.)
- North Carolina. Cost of instruction in high schools. In State superintendent. Biennial report, 1926. Raleigh, N. C. State superintendent, 1926. p. 17-20.
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FOGLEMAN, THOMAS B. A study in instructional costs in 50 Wisconsin schools—grades 7 to 12. Ph. M. thesis, 1925. *University of Wisconsin, School of education, Madison, Wis.*

HYDLE, LAES LARSON. The cost of high-school instruction in Wisconsin (statistical analysis). M. A. thesis, 1924. *University of Wisconsin, School of education, Madison, Wis.*

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HIGHER EDUCATION

See also Higher Education Costs; Junior College Costs; Teacher-Training Costs

California taxpayers' association (Report No. 38), Report on University of California. (Los Angeles, February 1931.) 52 pp. Harold A. Stone, Director of Research, J. C. Bennett, in charge.

An analysis of the growth of the university from 1918 to 1929 and the unit cost of instruction during the fall and spring semesters 1929-30.

KELLEY, F. J. Adequate cost analysis as a basis for budget-making. *Journal of educational research*, 7: 410-20, May 1923.

Analyses college finance in an attempt to determine the most useful units of cost and the items which shall be admitted into total cost. Recommends student-credit hour as the most useful unit, and suggests an examination of the curricula to determine if costly methods and courses are justified.

MAGER, HERMAN J. Unit costs of salaries in teachers colleges and normal schools. *New York, N. Y. Teachers college, Columbia university*, 1931. 107 p. (Teachers college, Columbia university, Contribution to education, no. 489.)

MOREY, LLOYD. Instructional cost accounting. The second joint meeting of the Association of University and college business officers. Minutes, May 1926. *Ohio State University, Columbus, Ohio*, 1926. p. 8-17.

Outlines the analysis of instructional costs by the comptroller of the university of Illinois. Defines some units of ex-

pense and determines what expenditures shall be included and what excluded in such an analysis. Discusses as a general analysis of all expenditures, the fiscal expense per student credit hour, semester credit hour expense, intercollege service, per capita instructional expense, distribution of resources, and capital investment expenses.

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JUNIOR COLLEGE

See also Junior College Costs

BUSH, R. H. Teacher load in the junior college, Abstract. National education association. Proceedings, 1930. p. 593-94.

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California taxpayers' association (Report No. 114). Junior colleges in California. (Not published.) Harold A. Stone, Director of Research, J. C. Bennett, in charge, Los Angeles, Calif.

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Using data from 20 California junior colleges, this study examines the factors affecting junior college instruction costs and sets up some tentative standards for the establishment of junior colleges.

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California. JOYAL, ARNOLD E. The cost of instruction in California junior high schools. M. A. thesis, 1926. *University of California, Berkeley, Calif.*

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PIMCO, D. H. Teaching costs in thirty-nine junior high schools. *Washington, U. S. Government*

printing office, 1924. 7 p. (U. S. Office of education. City school leaflet, no. 16, 1924)

TUSTISON, F. E. Electrical instruction with minimum cost and space for the junior high school. *Industrial arts magazine*, 16: 164-68, May 1927.

RURAL

WOLFE, W. G. Teaching cost in rural schools. *Journal of Ohio State teachers association*, 2: 10-12, August 1924.

STATISTICS

[These will be found in the State and city school statistics bulletins of the U. S. Office of education. See State Statistics; City School Statistics. Figures for totals, salaries, textbooks, supplies. Research bulletins of the National Education Association often contain data on total and per-pupil instructional costs by States, traceable thru the index at the end of each volume.]

WILEY, GEORGE M. Instructional school costs in cities and villages of New York State. *Albany, N. Y., University of the State of New York press*, 1925. 24 p. (University of the State of New York bulletin, no. 834.)

A study of data relating to number of pupils per teacher and to per pupil instructional costs in elementary and secondary schools in more than 100 New York State cities of various sizes during 1919-1923.

INSURANCE

See also Fire Insurance; Group Insurance; Life Insurance; Liability Insurance; Safe-Guarding Funds

COSTS

[The research bulletins of the National education association, e. g. vol. 3, no. 4, September 1930, give statistics on insurance costs for the United States and for individual States. Sources of data given. Figures for other years may be located through the index issued with the last number for each volume.]

GENERAL

BEYER, WALTER F. The practicability of State insurance funds. *American school board journal*, 83: 48, 116, 119, September 1931.

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FOWLKES, JOHN GUY. Insuring high-school athletes in Wisconsin. *Nation's schools*, 7: 92, 94, March 1931.

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HARDY, CHARLES O. Readings in risk and risk-bearing. *Chicago, Ill., University of Chicago press*, 1924. Chapter XVI.

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NOLTING, O. F. Municipal insurance. *Lawrence, Kans., State university*, 1927. *University of Kansas bulletin*, May 1, 1927.

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RIEDEL, ROBERT and LOMAN, H. J. Insurance principles and practices. *New York, N. Y., Prentice Hall, inc.*, 1924. (Chapter XXIII.)

A chapter of the book "Insurance Principles and Practice," defining and discussing in considerable detail corporate bonding in its many and varied uses as a form of casualty insurance.

INTEREST COSTS

See also Borrowing; Safe-Guarding Funds

[Statistics are to be found in the bulletins of the United States Office of education. See State Schools, Statistics and City Schools, Statistics. Valuable data appear in the United States Bureau of the Census series on Financial statistics of cities (latest in print, 1928) and Financial statistics of States (latest in print, 1929).]

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Usual article going through July 1931, on all items, and through September on some.

JUNIOR COLLEGE

See also Higher Education; Negro Schools; Secondary Education

AID

See State Aid, Junior Colleges

BIBLIOGRAPHY

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COSTS

See also *Instruction Costs, Junior College; Junior College, Financial Administration*

California. SEARS, J. B. and CUBBERLEY, ELLWOOD P. The cost of education in California. In *Educational finance inquiry commission. New York, N. Y., Educational finance inquiry commission, 1924.* Vol. 7, p. 11-12, 30.

CLARK, H. F. Junior college costs. *Indianapolis, Ind., Indiana university, 1927.* p. 68-78. (Indiana university. School of education. Bulletin, no. 4, September 1927.)

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Presents data from 38 junior colleges which show a range in annual per student cost from \$94 to \$472. Warns that data produced are not comparable.

Duluth, Minn. CHADWICK, R. D. Costs at Duluth. *Junior college journal*, 2: 172-73, December 1931.

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FRAZIER, A. M. The public junior college and its cost. *Texas outlook*, 13: 13-14, March 1929.

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JOHNSON, EARL A. Some phases of finance in the support of 30 representative public junior colleges in 6 central States of the United States. Ph. D. thesis, 1929. *Bloomington, Ind., University of Indiana press, 1929.* 274 p.

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POOL, WILLIAM F. Costs of junior and senior colleges. *Washington education journal*, January 1930.

Presents statistics which indicate that junior colleges may be and are operated for \$185 per student per year while universities are commonly operated at an individual cost of \$350 to \$750.

NEEVES, FLOYD W. The cost of education in an effective junior college. In *American association of junior colleges. Seventh annual report. Jackson, Miss., American association of junior colleges, 1926.* p. 52-59.

Analysis of costs based upon surveys of two junior and five 4-year colleges. Finds average cost per student is \$-63. Calculates the probable cost of an effective junior college program will be \$340 per pupil in a college of 250 enrollment.

WHITNEY, F. L. The cost of the public junior college. In *his The junior college in America. Greeley, Colo., Colorado State teachers college, 1928.* Chapter VII.

— The present status of the junior college movement. National education association. *Department of secondary school principals bulletin*, 25: 328-39, March 1929.

A comprehensive curriculum is maintained in most institutions at present, at a cost ranging from \$167 to \$440 per student, with an average of \$285.

FINANCIAL ADMINISTRATION

See also *Junior College Costs; Junior College, Support*

BROTHERS, E. Q. Present-day practices and tendencies in administration and organization of public junior colleges. *School review*, 36: 665-74, November 1928.

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Summary of financial conditions and recommendations as found and suggested by the data of various State surveys.

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A study of existing need and ability to pay for junior colleges based upon information secured from 266 high schools and 44 junior colleges. Recommends for economical reasons a minimum enrollment of 150 students drawing upon high-school enrollments of 900. Assumes a cost of \$400 per student and finds at least a \$15,000,000 assessed valuation desirable.

KANSAS. HUGHES, REES H. The public junior colleges in Kansas. *School review*, 38: 450-55, June 1930.

Data are given for the 10 junior colleges in the State. Findings are given with 5 pertinent suggestions for their administration.

KOOS, L. V. The financial problem. In his *Junior college*. Vol. 2. Minneapolis, Minn., 1924. p. 591-624.

The progress and problems of the junior college. In *American association of junior colleges*. Eighth annual meeting, 1928. p. 68-73.

Discusses financial support, taxation, source of the student body, the curriculum, and the relationships to the other units of the school system as problems precipitated from the growth of junior colleges in the United States.

OBRIEN, F. P. Conditions which justify establishing a junior college. *School review*, 36: 128-37, February 1928.

Sets forth four general conditions which should control the establishment of junior colleges. They are existing need, cost of maintenance, immediate urge, and apparent prospects, all in relation to the ability to pay and the attitudes of the community under consideration. Gives an outline for estimating the local need, and probable costs of maintaining reasonable standards, giving consideration to the present tax burden for education.

PROCTOR, W. M. Administrative problems of the large rural junior college. In *The junior college, its organization and administration*. Stanford university, Calif., Stanford university press, 1927. p. 75-97.

LEGAL

BROTHERS, E. I. Legal status of the publicly supported junior college, June 1929. *School review*, 38: 737-49, December 1930.

California. ELLS, WALTER C. California junior college laws: Drastic changes in force and commission of laymen appointed. *School executives magazine*, 50: 235, January 1931.

Discusses recent changes in the laws of California relating to increases in the

minimum financial requirements to be met in establishing junior colleges. Comments upon the probable effects these new laws will have on the further development of schools of this type in the State.

State board of education. Changes in junior college law. In *State board of education of California*. Seventh biennial report, 1926. p. 16-17.

North Carolina. A momentous judicial decision affecting the junior college. *School review*, 38: 723-26, December 1930.

Reviews a North Carolina supreme court decision by which the junior college is defined as a legal element of the free public-school system.

WAHLQUIST, JOHN T. A study of the social, economic, professional, and legal status of the junior college. *Stanford university, Stanford University, Calif.*, 1931. 14 p.

Legal status of junior college instructors. *Junior college journal*, 1: 187-90, January 1931.

WHITNEY, F. L. Legal background of the junior college movement. *High school teacher*, 6: 322-24, October 1930.

SALARIES

See *Salaries, Junior College*

STATISTICS

[These are to be sought in *Higher Education, Statistics*, which see]

SUPPORT

See also *Junior College Cost; Junior College, Financial Administration*

Arkansas. PRALL, CHARLES E. Report of the junior college survey committee. *Journal of Arkansas education*, 9: 18-23, November 1930. 2 tables.

A careful study of junior college costs and standards as found in different parts of the country, with effort to make such modification in them as to fit conditions in Arkansas.

BERRY, M. P. L. Junior college endowments (with discussion). In *American association of junior colleges*. Fifth annual report, 1925. Cincinnati, Ohio, American association of junior colleges, 1925. p. 88-93.

BIZZELL, W. B. Address to American association of junior colleges. In *American association of junior colleges*. Ninth yearbook, 1938. Fort Worth, Tex., Fort Worth publishing co., 1928. p. 55-57.

- Boise, Idaho. KOOS, LEONARD V. Report regarding the establishment of a junior college in Boise. *Boise, Idaho, Board of education*, September 1930. 16 p.
- BUTLER, NICHOLAS MURRAY. University and the junior college. In President of Columbia University. Annual report of President, 1926-27. *New York, N. Y., Columbia university*, 1927. p. 30-33.
- California. JOYAL, ARNOLD E. Factors relating to the establishment and maintenance of Junior colleges, with special reference to California. Ph. D. thesis. University of California. Publications in education Vol. 6, no. 6. 1932. *University of California, Berkeley, Calif.*
- KEMP, WILLIAM WEBB. Junior college development in California. *Junior college journal*, 1:281-88, February 1931.
- MOROAN, WALTER E. Recent development in the junior college movement in California. In Department of secondary principals. Fourteenth yearbook, 1930. *Sacramento, Calif., Department of education of California*, 1930. p. 229-42. (Department of secondary principals. Bulletin, no. 3, March 1930.)
- WOODS, B. M. Economic analysis of an effective junior college. *California quarterly of secondary education*, 4: 20-24, October 1928.
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- CARR, WILLIAM G. The junior college in State school surveys. *Junior college journal*, 1: 357-62, March 1931.
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- Connecticut. JUNIOR COLLEGE. Endowments for junior colleges. In Facts about the junior college of Connecticut. *Bridgeport, Conn., Junior college of Connecticut*, 1930. 24 p.
- Needed support in terms of number of students. In Some questions answered. *Bridgeport, Conn., Junior college of Connecticut*. 12 p.
- EBY, F. and PITTENGER, B. F. Financing public junior colleges. *Texas outlook*, 13: 70, June 1929.
- KELLS, WALTER C. The public junior college as an agency of democracy—the financial aspect. *Bulletin of the Department of secondary school principals of the National education association*, 35: 134-50, March 1931.
- Address given at the Detroit convention of the department. A plea for elimination of tuition charges in junior colleges and for liberal State support.
- FORD, WILLARD S. The social-economic background necessary for an effective junior college. *California Quarterly of secondary education*, 4: 32-34 October 1928.
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- Iowa. WALLACE, CLARA M. Development of junior colleges in Iowa. *Junior college journal*, 1: 176-82, January 1931.
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- Junior colleges (1918-1928). *School and society*, 31: 529-30, April 19, 1930.
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- Missouri. CARPENTER, W. W. Records of public junior colleges of Missouri. *Peabody journal of education*, 8: 348-61, May 1931.
- Brief discussion of records forms as used in the eight public junior colleges of Missouri. Samples of 80 of these record forms are reproduced, dealing with individual pupils, pupils in groups, teachers, business procedure, and requests to alumni.
- MORT, PAUL R. State participation in the financing of junior colleges. *Teachers college record*. 30: 745-51, May 1929.
- Discusses the financial implications involved in readjustments made necessary if the State should substitute a state-wide system of junior colleges for the first two years of its university, if it should withdraw all support from these first two years in the university, or if it should eliminate tax-supported junior colleges.
- Nashville, Tenn. Methods of securing revenue for Southern denominational junior colleges. Unpublished master's thesis. 1927. Nashville, Tenn., *George Peabody teachers college press*, 1927.
- NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. A self-survey plan for State school systems. *Washington, D. C., National education association*, 1930. p. 154-55. (Research bulletin, vol. 8, May 1930.)
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- Compares methods of financing junior colleges in Texas with methods in other States, presents general financial facts of Texas school systems maintaining junior colleges, analyzes general control and salary costs, compares junior college costs with university of Texas costs, examines the ability of various districts to support junior colleges and discusses the question of State aid. Nine recommendations.
- EATON, EDITH ST. JOHN. The junior college movement in Texas. *Texas outlook*, 11: 9-12, February 1927.
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- A statement of general principles and their application to actual situations in the State of Washington. Presents a detailed analysis of various population and financial data for the 23 largest cities in the State. "Washington at present has logical use for 13 or at the most 17 district junior colleges. State aid or student tuition seems necessary. These 17 districts have 80 per cent of all the high-school students in the State."
- PRIOR, ELIZABETH A. Yakima backs up its schools. *Journal of education*, 112: 551-52, December 29, 1930.
- Outlines development of junior college at Yakima, Wash., since 1928, and remarkable support given it by the community in a State where the public junior college is not authorized by law.
- WHITNEY, FREDERICK L. Democratic support of the junior college. In *National education association. Addresses and proceedings of the sixty-ninth annual meeting*, 1931. p. 589-90.
- Abstract of address before Detroit meeting of department of secondary school principals.
- Utah. MILLIKIN, BRUCE E. Need of public junior colleges in Utah. *Junior college journal*, 1: 344-56, March 1931.

Wyoming. Junior colleges in Wyoming. *School executives magazine*, 49: 421, May 1930.

JUNIOR HIGH SCHOOL

Look for this as a subhead under the phase desired, as Building Costs, Instruction Costs, Salaries, Secondary Education Costs

KINDERGARTEN

See also Nursery Schools.

DAVIS, MARY DABNEY. A primer of information about kindergarten education. *Washington, U. S. Government printing office*, 1928. p. 1-11. (U. S. Office of education, city school leaflet. 1928, no. 30.)

A question and answer study concerning kindergartens, with data for salaries, page 4. Kindergarten teachers receive about the same amount as elementary teachers, but less than teachers in secondary grades. In cities of 10,000 and more population the average cost of instruction per-pupil in average daily attendance in kindergarten grades is \$51.55, in elementary grades \$63.50, in junior, high school grades \$86.91, and in senior high school grades \$116.57.

Nursery-kindergarten-primary education, 1924-26. *Washington, U. S. Government printing office*, 1927. p. 1-46. (U. S. Office of education. Bulletin, 1927, no. 28.)

Includes salaries paid kindergarten teachers and supervisors in city schools in 1926-27.

Kindergarten-primary education. *Washington, U. S. Government printing office*, 1930. 41 p. (U. S. Office of education. Bulletin, 1930, no. 30.)

A statistical and graphic study based upon information given June, 1928, by public-school systems and by sampling of privately supported schools, showing (1) educational programs in both public and private schools with regard to presence or absence of kindergartens; (2) population of towns and cities in which public-school systems contributing data are located; (3) source of support for privately supported schools.

VANDEWALKER, NINA C. Kindergarten legislation. *Washington, U. S. Government printing office*, 1925. (U. S. Office of education. Bulletin, 1925, no. 7.)

LABORATORY COSTS

See Science Costs; Higher Education Costs

LAND-GRANT COLLEGES

See also Higher Education; Negro Schools; Teacher Training

GREENLEAF, W. J. Federal laws and rulings affecting land-grant colleges

and universities. *Washington, U. S. Government printing office*, 1930. 13 p. (U. S. Office of education. Pamphlet, no. 15, November 1930.)

KLEIN, ARTHUR J. Survey of land-grant colleges. *Journal of higher education*, 2: 169-76, April 1931.

Outlines and explains investigations made by the land-grant colleges survey staff, including those relating to finance.

Survey of land-grant colleges and universities. *Washington, U. S. Government printing office*, 1930. p. 837-913; (U. S. Office of education. Bulletin, 1930, no. 9.)

A rather complete investigation of the sources of income, the method of accounting, and the business management of land-grant colleges for negroes. The average amount paid by the State for the maintenance of these schools is less than 50 per cent. A large amount of the running expense is collected as fees from the students.

National advisory committee on education. Federal relations to education. Part I. Committee findings and recommendations. 140 p. Part II. Basic facts. 448 p. 744 Jackson Place, Washington, D. C.

Good but scattered theoretical discussions and recent statistics appearing in Part II are traceable under the index head of Colleges of agriculture and mechanic arts.

STATISTICS

[Financial statistics on such items as receipts, expenditures, and salaries appear regularly in the bulletins of the United States Office of Education on Land-grant colleges and universities, the latest in print for 1929 being bulletin 1930, no. 28. Bulletins for previous years may be located through the price list of educational publications of the United States Office of Education at Washington, D. C., or in Carter Alexander's *Educational Research*, third edition, 1931, under the head of Agricultural and Mechanical Colleges. Many financial statistics for preceding years appear in the Land-grant college survey published in two volumes as Bulletin 1930, no. 9.]

LEGAL

For legal treatment of any phase, e. g. Junior Colleges, see that head. See also Legislation.

CAMMACK, J. W., jr. Liability of school authorities for the enforcement of rules characterized as unreasonable by courts. *Elementary school journal*, 31: 379-86, January 1931.

EDWARDS, I. N. Tort liability of school districts. *Elementary school journal*, 30: 34-50, September 1929.

Where and how to find the law relating to school administra-

tion. *Elementary school journal*, 27: 14-24, September 1926.

This study describes materials and methods of research employed in reducing to a systematic organization the legal principles involved in the administration of the public schools. How to find statute laws, case laws, and how to evaluate cases are among the questions considered.

KELLY, G. K. Questions of justice and security. *Michigan educational journal*, 8: 213-14, December 1930.

Law and administration. *Journal of higher education*, 2: 195-203, April 1931.

The author sets forth some court decisions dealing with the administration of college dormitories, with reference to the means of financing construction, the maintenance of proper discipline therein, and the tort liability of the institution for injuries to students resulting from housing conditions.

LIEDLER, C. C. Legal aspects of residence for school purposes. *American school board journal*, 75: 45-46, 148, September 1927.

McMILLAN, MARK E. C. The rights and powers of a school supported at public expense to engage in business. M. A. thesis, 1927, *Ohio State university, Columbus, Ohio*.

SCHROEDER, H. H. Legal opinion on the public school as a State institution. *Bloomington, Ill., Public-school publishing co.*, 1928. 81 p.

Analyses the State's legal right to provide funds to secure sites, equipment, and teachers for schools, and explains the legality of State and local taxation for the support of public schools. Defines the legal relationships of the State and the locality to the school, and their relative rights and obligations to support the school.

TRUSLER, H. R. Essentials of school law. *Milwaukee, Wis., Bruce publishing co.*, 1927. 478 p. (Particularly chapters 5, 7, 8, 10, 11, and 14.)

An examination of school laws and decisions concerning the legal status of incidental fees in public schools, of pensions for teachers, and public support of private schools. Discusses illegal expenditure of school money, legal and illegal uses of school property, and the exemption of school property from taxation.

YAKEL, RALPH. The legal control of the administration of public school expenditures. *New York, N. Y., Teachers college, Columbia university*, 1930. 167 p. (Teachers college, Columbia university. Contribution to education, no. 388.)

Considers the most desirable legal controls for the regulation of the administration of public-school expenditures—viewed from two standpoints, the legal or political, and the technical or service.

Suggests a legal code for the use of those who might seek to enact these findings into law.

LEGISLATION

See also Legal

[Recent finance legislation items appear in the bulletins of the United States Office of education, the latest in print covering 1926-28 in bulletins 1929, no. 27. Back numbers can be located under the head of Educational legislation in the price list of Educational publications of the United States Office of Education at Washington. The National education association issues a series of bibliographies of school legislation. The first appeared in December, 1929, the second in December, 1930 and the third is scheduled for September, 1932.]

Pennsylvania. KEITH, JOHN A. Discoverable trends in previous legislation in Pennsylvania relative to financing public education. In Pennsylvania university. Fifteenth annual Schoolmen's week proceedings, 1928. p. 341-44.

LIABILITY INSURANCE

ENGELHARDT, N. I. and ENGELHARDT, FRED. Other insurance (Liability insurance). In their *Public-school business administration*. New York, N. Y., Teachers college, Columbia University, 1927. p. 401-2.

The theory and necessity of liability insurance.

LENTZ, A. E. Liability of districts for negligent operation of motor vehicles. *Sierra educational news*, 25: 22-24, October 1929.

Discusses in detail the legal provision in California regarding the responsibility of a school district for the negligent operation of its motor vehicles. Explains that school districts may carry liability insurance covering accidents to pupils or property and the premiums are a proper charge against the general fund of the school district.

LINN, H. H. Bonding school officials. *American school board journal*, 84: 37-38, 92, February 1932.

A rather technical treatment of bonding with special reference to legal aspects. Limitation on liability, approval of bonds, termination of liability, receipts versus expenditures, and the amounts for which bonds should be written are some of the questions considered.

KREDER, WARD G. Liability insurance. In his *The fundamentals of public-school administration*. New York, N. Y., Macmillan co., 1930. p. 270.

Points out that casualty insurance covers two types of risks: Damage to the policy holder's person or property, and damage to the person or property of others. The second type is frequently called liability insurance.

SMITH, H. P. Business administration of public schools. *Yonkers-On-Hudson, N. Y., World book co., 1929.* 432 p.

Discusses the purpose and provisions of liability insurance policies in their relation to school administration.

WELTZIN, JOAKIM FREDERICK. The legal authority of the American public school as developed by a study of liability to damages. Doctor's dissertation, *University of North Dakota, Grand Forks, N. Dak., 1930.* 239 p.

LIBRARY

AID

See State Aid, Library

COSTS

See also Auxiliary Agencies

AMERICAN LIBRARY ASSOCIATION. Committee on classification of library personnel. Budgets, classification and compensation plans for university and college libraries. *Chicago, Ill., American library association, 1929.*

California. NICHOLS, J. R. Library costs in California high schools. *California quarterly of secondary education, 5: 195-98, January 1930.*

Shows, by using the value of library books expressed as a percentage of the total value of the school plant, and in relation to per pupil in average daily attendance and the cost of maintaining libraries per pupil in average daily attendance as measures of library costs in California high schools, that per pupil library costs range from \$1.36 to \$9.37.

CERTAIN, C. C. The elementary school library defined in dollars and cents. In *Elementary school library standards. Chicago, Ill., American library association, 1925.* p. 29-34.

FAY, LUOY E. The library in the junior college (with discussion). In *American association of junior colleges. Tenth yearbook. Atlantic City, N. J., American association of junior colleges, 1929.* p. 118-29.

Presents a suggested \$10,000 library budget for a junior college with an annual income of \$125,000.

HEWELIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Library service. *University of Nebraska, extension division. Lincoln, Nebr., 1932.* p. 143-44, 199. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies

in this field and a check list for knowing when such economies are secured.

KOOS, FRANK H. Expenditures. In *his State participation in public-school library service. New York, N. Y., Teachers college, Columbia university, 1927.* p. 83-85. (Teachers college, Columbia university. Contributions to education, no. 265.)

Defines high-school library standards of 14 States, expressed in terms similar to those used by the accrediting organizations, annual expenditures, initial expenditures for books and library, and the value of books.

STROOPS, R. D. A school library on a modest budget. *Library journal, 50: 222-23, March 1925.*

A descriptive analysis of how a school library can be operated successfully on a modest budget.

PENSIONS

See Pensions, Library

STATISTICS

See also Auxiliary Agencies

[Statistics appear in bulletins of the United States Office of education, the latest being in Bulletin 1930, no. 37 and covering 1929. Bulletins giving data for certain previous years can be located under the head of Libraries in the price list of educational publications of the United States Office of education. Some finance data will be found in the State and city school statistics bulletins of the United States Office of education. See State Statistics; City School Statistics. The United States Bureau of the Census gives library statistics in its Financial Statistics of Cities (latest in print, 1928) and in its Financial Statistics of States (latest in print, 1929)]

KOOS, FRANK H. Financial statistics. In *State participation in public-school library service. New York, N. Y., Teachers college, Columbia university, 1927.* p. 139-41. (Teachers college, Columbia university. Contributions to education.)

SUPPORT

See also State Aid, Libraries

CARNEGIE CORPORATION. Gifts to college libraries. *Libraries, 35: 353, October 1930.*

Grants for college libraries. *School and society, 31: 831-32, June 21, 1931.*

KOOS, FRANK H. Revenue. In *his State participation in public-school library service. New York, N. Y., Teachers college, Columbia university, 1927.* p. 11-13, 19-21, 63-72. (Teachers college, Columbia univer-

sity. Contributions to education, no. 265.)

Deals with the statutory provisions concerning the appropriations and revenues for public-school library purposes and the method of administering them as found in the various States. Tabulates statutory provisions for State financial aid to public-school libraries.

THEBOP, EDITH A. State and county financial aid for rural school libraries. *School life*, 14: 118-19, February 1929. Extract in *Elementary school journal*, 29: 733-34, June 1929.

Shows wide variations in yearly State grants for rural school library support. Examines New York State's method of financial encouragement and various local sources of support for libraries. Finds State appropriations for support of rural school libraries insufficient.

METCALF, K. D. Record of gifts to universities, colleges and reference libraries, September 1927 to December 1928. American library association committee of college and reference section. In *College and reference library yearbook*, no. 1. p. 64-79.

The number and amounts of gifts to college and university libraries in 27 States.

LIFE INSURANCE COSTS

See also Insurance

DETROIT EDUCATIONAL BULLETIN. FORMS of life insurance policies; fourth report of insurance committee of the administrative division of the Detroit teachers association. *Detroit educational bulletin, Detroit, Mich.*, 10: 10-12, December 1926.

GATES, C. RAY. What teachers buy in life insurance. *School executives magazine*, 51: 127-28, November 1931.

A report of a study in a city of 20,000 population to determine the status of the teaching staff with reference to life insurance. Certain significant facts about the amount of insurance carried, the economic responsibilities of those insured, the number of teachers insured, the type of policy, and the differences between men and women, are revealed. The writer draws some sound conclusions from his findings.

NORRON, J. K. Life insurance expenditures by States in 1928. *Washington, D. C., National education association*, 1930. p. 178. (Research bulletin, vol. 8, no. 4, September 1930.)

Statistics of expenditures made for life insurance in the various States, and the total for the United States in 1928. National expenditures were \$3,145,584,000 in 1928. Statistics for previous years may be located through the indexes of the annual volumes of this bulletin. Data given by States. Sources indicated.

LUXURIES

See also Taxes, Luxury

NORRON, J. K. Luxury expenditures in the several States in 1928. *Washington, D. C., National education association*, 1930. p. 181. (Research bulletin, vol. 8, no. 4, September 1930.)

Statistics of expenditures made in various States and the entire Nation for tobacco, soft drinks, ice cream, candy, chewing gum, theaters, movies, jewelry, perfumes, cosmetics, sporting goods, and toys in 1928 are by States for the items, and compared with education costs. Similar data for previous years may be located through the indexes of the annual volumes of this bulletin. Sources of data given.

MAINTENANCE

See also Operation

COSTS

See also Operation

GOSLING, T. W. School plant; the cost of maintenance. *American school board journal*, 80: 68, May 1930.

Points out the necessity for a detailed cost-accounting system which will segregate capital outlay from revenue and expenses for maintenance only. Recommends a maintenance program over a period of years which will show the percentage of revenue devoted to maintenance and taking the optimum life expectancy of a school building into consideration. Illustrates trends in maintenance cost by data taken from a number of cities throughout the United States for the year 1925-26.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Maintenance costs per pupil in average daily attendance in cities, 1923. *Washington, D. C., National education association*, 1924. p. 38, 42, 46. (Research bulletin, vol. 2, no. 1-2, January, March 1924.)

Pennsylvania. DECKER, W. N. School costs in Pennsylvania, comparative operation and maintenance costs. In *University of Pennsylvania. Thirteenth annual schoolmen's week proceedings*, 1926. p. 233-41.

SCHWARTZ, H. M. Improvement in the maintenance of public-school buildings. *New York, N. Y., Teachers college, Columbia university*, 1926. 74 p. (Teachers college, Columbia university. Contributions to education, no. 240.)

Determines scientifically the parts of public-school buildings most frequently in need of repair, the annual cost and relative importance of such repairs, the relationships existing between the size of a building, and the age of the building. Finds painting, boilers, grounds, glazing,

roofs, bells, sash cords, doors, wiring, fixtures, and drains the most important items of repairs.

SMITH, HENRY LESTER and NOFFSINGER, FOREST RUBY. First supplement to the bibliography on school buildings, grounds, and equipment — August 1927 to April 1932. Vol. IX, Nos. 1 and 2, September–November 1932 (Scheduled for bulletin of school of education of Indiana university.)

Will contain a section on maintenance of school buildings and equipment.

ECONOMIES

California. Maintenance economies. *California schools*, official publication, issued monthly by State department of education, Sacramento, Calif., March 1932. Vol. 3, no. 3, p. 70.

DUPONT, P. D. Schools; maintenance and replacement. *American school board journal*, 72: 51–52, May 1926.

Computes the annual cost of an educational plant by dividing the original total cost by the number of years the building serves. Analyzes building needs for which there are no financial provision as an actual debt, and outlines a plan by which school boards may make financial provisions for depreciation and reconstruction.

ENGELHARDT, N. L. and ENGELHARDT, FRED. Property management in local school systems. *Teachers college record*, 28: 481–503, January 1927.

Analyzes cost of school-building maintenance and operation by a discussion of property values, service values of educational property, classification of school property, difference between equipment and supplies, factors underlying plant management, responsibilities for management, specialization in services, property standards, school building standards, standards for classroom equipment, uses of school property, reuse and multiple use, educational service use of buildings, multiple use of classrooms, maintenance and operation programs, maintenance budget, and property inspection.

FROSTIC, F. W. School plant: some problems of the school executive in maintenance and operation. Official report, 1930. National education association. Department of superintendence. 1930. p. 203. (Abstracts.)

Lists several problems which face school superintendents relative to operation and maintenance of the school plant, and presents some of the factors which determine the nature of these problems.

HALLETT, EDWIN S. Better budget for summer building repairs. *American school board journal*, 76: 39, January 1928.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter VII, Maintenance of the school plant. *University of Nebraska, extension division, Lincoln, Neb.*, 1932. p. 122–27, 187–90. (University of Nebraska publications, educational monograph, no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

Highland Park, Mich. School building maintenance; Highland Park, Mich., public school. *American school board journal*, 81: 52, July 1930.

LYON, WILLIAM H. Maintenance. *Los Angeles school journal*, 9: 29–30, March 8, 1926.

MOEHLMAN, A. B. When remodeling is profitable. *Nation's schools*, 4: 43, November 1925.

OLSEN, M. E. School housekeeping; preserving the floors. *American school board journal*, 74: 46, 133, February 1927.

Describes methods found from experience to be most effective and economical for the preservation, protection, and maintenance of school floors. Finds oil or wax rather preferable to varnish.

RAMSEY, H. E. School building maintenance. *American school board journal*, 72: 51–52, 137–38, February 1926; 72: 54, 104, 107, June 1926; 73: 44, 164, July 1926; 73: 50, September 1926.

Describes a workman's time card, a requisition for material, a credit memorandum for returned materials, a job record card, and some supplementary forms which will facilitate accounting for school maintenance costs. Reproduces suggestive forms.

SCHWARTZ, HARWOOD M. Improvement in the maintenance of public-school buildings. *New York, N. Y., Teachers college, Columbia university, Bureau of publications*, 1927. 74 p. (Teachers college, Columbia university. Contributions to education, no. 240.)

Suggests certain changes in the organization and housing of repair activities and also a system of records that will make possible desirable refinements in repair accounting, thereby improving the maintenance program of a school system in a more economical way. The correlations among such factors as average yearly cost of repair per building, average yearly cost of repairs per classroom, age, score, size, and type are used in determining relative costs of repairs and also become the basis for predicting the yearly cost of repairs.

SCOTT, FRANK A. An experience in maintenance. *American school board journal*, 75: 50, 145-46, July 1927.

TILT, R. E. Study in maintenance costs of school buildings: Contract method vs. regularly employed staff. In National education association. Public-school business officials. Proceedings, 1929. Washington, D. C., National education association, 1929. p. 24-29.

EQUIPMENT

Repairs and upkeep of school houses. *American school board journal*, 75: 112, October 1927.

WARING, RALPH G. The maintenance and reconditioning of school equipment. *American school board journal*, 73: 69-70, 173, July 1926.

Describes in detail the methods used to recondition school furniture at a fraction of the original cost developed in the Tuscarora laboratories in Syracuse, N. Y. Explains cleaning solutions, and mechanical techniques, varnish, stain, and paint formulæ, and labor and time requirements are given. Estimates costs.

WEBB, F. G. The care of school equipment. *American school board journal*, 75: 112, 114, July 1927.

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[These will be found in the State and city school statistics bulletins of the United States Office of Education. See State Statistics; City School Statistics]

MANUAL ARTS

See Vocational Education

MILL SCHOOL COSTS

COOK, J. H. Comparative cost of mill schools. In A study of the mill schools of North Carolina. New York, N. Y. Teachers college, Columbia university, 1925. p. 11-13. (Teachers college, Columbia university. Contributions to education, no. 178.)

Figures showing that mill companies in North Carolina about 1924, tended to shorten courses and save money by avoiding taxation in the schools they controlled.

MUSIC COSTS

CHAPMAN, IRA. Cost of music instruction. In National education association. Department of superintendence. Official report, 1928. p. 192-93.

Gives per capita and percentage of total expenditure costs of music in public

schools. Finds median per capita cost to be 91 cents and the median percentage of total expenditures to be 1.7.

DYKEMA, PETER W. Music for public-school administrators. *Bureau of publications, Teachers college, Columbia university*, 1931. 171 p.

Adapts (p. 192-93) costs figures from Superintendent Chapman's 1928 Department of Superintendence paper and gives prices (p. 146-53) for three grades of every instrument.

MILLER, C. H. The cost of music education. In National education association. Department of superintendence. Official report, 1928. p. 93-94.

Compares the public expenditures for musical concerts with the amounts spent for music in the schools. Describes the music education program at Rochester, N. Y., and analyzes its costs.

NATIONAL SCHOOL FINANCE SURVEY

MORT, PAUL R. The national survey of school finance. *American school board journal*, 83: 53, November 1931.

Aims, problems, and news to date of this survey by its associate director, who is the chief technical worker.

School expenditure map for America. *School life*, 17: 32-33, October 1931.

Describes the plans and personnel of the National school finance survey of the United States Office of education and lists "21 unknowns of school finance," under consideration by the survey.

NEGRO SCHOOLS

See also Land-Grant Colleges

COSTS, ELEMENTARY

NATIONAL ASSOCIATION OF TEACHERS IN COLORED SCHOOLS. Status of elementary Negro education. Official organ of the National association of teachers in colored schools. p. 14-15, 25-26. (Bulletin, November 1930, no. 11.)

NEWBOLD, N. C. Common schools for Negroes in the South. *Annals of American academy of political and social science*, 140: 200-23, November 1928.

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BLOSE, DAVID T. (Expenditures.) Instruction, 1925-26. In Statistics of education of the Negro race, 1926-27. Washington, U. S. Government printing office, 1928. Table 24. p. 32. (U. S. Office of education. Bulletin, 1928, no. 19)

BLOOM, DAVID T. Financial and property summary of private and State secondary and higher schools for Negroes, 1927-28. In *Statistics of the Negro race, 1927-28*. Washington, U. S. Government printing office, 1930. Table 9. p. 15. (U. S. Office of education. Pamphlet, no 14, December 1930.)

MCCUISTION, FRED. Comparative costs of public education white and colored. Bulletin (N. A. T. C. S.) 11: 14, 26. October 1930.

COSTS, HIGH SCHOOL

FAVROT, L. M. Some facts about Negro high schools and their distribution and development in fourteen southern States. *High school quarterly*, p. 145-48, April 1929.

A few figures and statements of status in January, 1929, for State aid, and help from the foundations.

Virginia. COMBS, M. L. Efficiency in relation to size of high school. *Richmond, Va., State department of education, 1927*. 185 p. (Research and surveys department. Bulletin, vol. 10, no. 3, 1927).

A statistical tabulation of high-school instructional costs in seven types of white and Negro schools in Virginia in 1923-25 is presented in chapters 4 and 5 of this study.

COSTS, HIGHER EDUCATION

DAVIS, J. Outlook for Negro colleges. *Southern workman*, 57: 129-36, March 1928.

Discusses the need for increased revenues and gives the total educational income for Negro colleges in 1925-26.

Federal aid to Howard university. *School and society*, 29: 249-50, February 23, 1929.

Report of a conference held to discuss the new law authorizing Federal aid to Howard University. Recommendations agreed upon, include a thorough inspection by the Office of Education, a 10-20-year program of Federal support, the development of educational service, and a building program.

FISHER, I. Florida builds its State Negro college. *Southern workman*, 58: 507-12, November 1929.

GENERAL EDUCATION BOARD. Appropriations for Negro colleges. In *General education board. Annual report, 1929-30*. New York, N. Y. 75 p.

GREENLEAF, W. J. Land-grant colleges and universities, 1928. Washington, U. S. Government printing office,

1929. p. 64-67. (U. S. Office of education. Bulletin, 1929, no. 13.)

Presents tabular data showing enrollments, teachers' salaries, incomes, receipts, and expenditures statistics for white and Negro land-grant colleges in United States during 1927-28.

KLEIN, ARTHUR J. Financial data on junior colleges. In *Survey of Negro colleges and universities*. Washington, U. S. Government printing office, 1928. 964 p. (See p. 235-44, 506-12, 564-73, 746-53, 779-93, 849-56.) (U. S. Office of education. Bulletin, 1928, no. 7.)

Detailed survey of Negro colleges, in 1928, including financial data and recommendations for a number of junior colleges in several Southern States.

North Carolina. Survey of Negro colleges of North Carolina. Raleigh, N. C., State department of public instruction, 1930.

U. S. OFFICE OF EDUCATION. Control and finance. In *Survey of Negro colleges and universities*. Washington, U. S. Government printing office, 1929. p. 5-33. (U. S. Office of education. Bulletin 1928, no. 7.)

A critical detailed survey of 79 institutions of Negro higher education. Four types of government are found, as follows: 22 publicly supported institutions under State control; 9 universities and colleges governed by independent boards and privately supported, 31 universities and colleges under control of white church boards, and 17 privately supported colleges owned and controlled by Negro church boards. Gives figures on increases in income, value of physical plant, and productive endowments.

Finance in Negro land-grant colleges. In *Survey of land-grant colleges and universities*. Washington, U. S. Government printing office, 1930. p. 852-72. (U. S. Office of education. Bulletin, 1930, no. 9, vol. 2.)

SALARIES

See Salaries, Negro

STATISTICS

[These are to be found in the publications of the United States Office of education. They can be located under the head of Negro Education in the United States Office of education price list of educational publications]

BLOOM, DAVID T. Financial statistics. In *Statistics of the Negro race, 1928-29*. Washington, U. S. Government printing office, 1930. p. 15-16. (U. S. Office of education. Pamphlet, no. 14, 1930.)

Statistics of Negro elementary and secondary education. *School and society*, 29: 481, April 1929.

SUPPORT, GENERAL

DILLARD, JAMES H. Fourteen years of the Jeanes fund, 1909-1923. Durham, N. C., 1923. p. 193-201.

HOLMES, M. J. Conditional gifts to schools for Negroes sponsored by the board of education of the Methodist Episcopal church. *Association of American colleges bulletin*, 16: 486-88, December 1930.

National advisory committee on education. Federal relations to education. Part I. Committee findings and recommendations. Part II. Basic facts. 448 p. 744 Jackson Place, Washington, D. C.

Both volumes contain brief but scattering theoretical discussions and background material essential for any intelligent consideration of support of negro education. Materials are indexed under the head of Negroes.

SMITH, S. L. Negro public schools in the South. *Southern workman*, 57: 449-61, November 1928.

Outlines the extent of support offered Negro public schools in the South by the Julius Rosenwald Fund.

WORK, MONROE N. Negro yearbook—An annual encyclopedia of the Negro. Tuskegee, Ala., *Negro yearbook publishing co.*, 1925. p. 301-41.

Finance for Negro schools, p. 301-41. Financing capital outlay, p. 40-44. 298-95.

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Alabama. LAMBERT, J. S. What is Alabama doing for Negro education? Current expense. *Journal of rural education*, 2: 325-27, March 1923.

Florida. Negro education in Florida. In Report of educational survey of education in Florida. Tallahassee, Fla., T. J. Appleyard, 1929. p. 358-78.

— State department of public instruction. Progress and status of Negro education in Florida. Tallahassee, Fla., *State department of public instruction*, 1928. 11 p.

Louisiana. Dillard University: Two million dollars for Negro health and education in New Orleans. *American City*, 43: 110, July 1930.

An itemized outline explaining how \$2,000,000 will be spent to promote medical education and Negro welfare in New Orleans by the establishment of an institution named Dillard University.

Mississippi. HILBUN, DORA. Semi-consolidation without transportation for Negro schools in Coahoma

County. *Mississippi educational advances*, 18: 228, April 1927.

Describes a semi-consolidation plan whereby 16 "center schools" bring an efficient school within three miles of every Negro child, enabling the county to save the expense of transportation for the improvement of the educational program. A county high school for Negroes is also provided in the plan, with an educational program fitted to the practical needs of the Negroes of that locality.

— Negro common schools in Mississippi. *Crisis*, 38: 90-102, December 1926.

— Negro education. In Public education in Mississippi. Jackson, Miss., State, 1925. p. 325-35.

North Carolina. ALLEN, A. T. North Carolina's school program. *Southern workman*, 57: 271-77, July 1928.

— CLEMENT, R. E. A history of Negro education in North Carolina. Doctor's thesis, 1930. *Northwestern university, Evanston, Ill.*

— Negro common schools in North Carolina. *Crisis*. 34: 79-80, 96-97, 117, 133-34, 1927.

— NEWBOLD, N. C. Negro education in North Carolina. Financing capital outlay. *Journal of rural education*, 4: 145-56, December 1924.

— Promoting education in Buckingham County. *Southern workman*, 58: 373-76, August 1929.

Oklahoma. The Negro common school in Oklahoma. *Crisis*, 35: 113-16, 136-37, April 1928.

South Carolina. Laurens County, S. C. Colored schools. In Survey of public schools of Laurens County, S. C. Columbia, S. C., R. L. Bryan co., February 1928. p. 160-61.

— Negro common schools. *Crisis*, 34: 830-32, December 1927.

Texas. Donations to Negro education in Texas. Annual conference on education for Negroes. Proceedings of first annual conference, 1930. *Prairie View, Tex., Prairie View State college*, 1930. p. 13-19. (Document, no. 8.)

— MARRS, S. M. N. Negro education in Texas—Capital outlay. In Negro education in Texas, Austin, Tex., *State department*, 1926. 28 p. (Document, no. 212.)

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Texas. Port Arthur, Tex. Receipts for schools for colored children. In Report of the survey of the schools of Port Arthur, Tex. *New York, N. Y., Teachers college, Columbia university, 1928.* p. 113, 123-24, 332.

Notes the discrepancy between expenditures per pupil for Negro and white schools, and analyzes the sources of receipts for Negro schools. Tabulates costs of living and salaries of Negro teachers, and devises a basis for salary schedule calculations for Negro teachers.

Virginia. Gloucester County, Va. Ratio of expenditures—for white and colored children. In Educational survey report of Gloucester County, Va. *Richmond, Va., State printing, 1928.* p. 24.

— GRESHAM, W. D. Negro education in Virginia. *Southern workman, 58: 533-38, December 1929.*

— Louisa County. Educational survey report of Louisa county, Va. In Financial support and Negro schools. *Richmond, Va., State board of education, 1928.* p. 22-29.

— Negro education. Public education in Virginia. In Report of educational survey commission. *Richmond, Va., Public printing, 1928.* p. 279-92.

TEACHER TRAINING

[Statistics are to be found in the bulletins of the United States Office on statistics of teachers colleges and normal schools. These may be located under the head of Colleges and Universities in the price list of educational publications of the United States Office of Education or under the head of Teacher Training Institutions in Carter Alexander's Educational Research, third edition, 1931]

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Louisiana. McALLISTER, JANE ELLEN. Training of Negro teachers in Louisiana. Doctor's thesis, 1929. *Teachers college, Columbia university, New York N. Y.* 95 p. (Teachers college, Columbia university. Contributions to education, no. 364.)

Mississippi. State department of education. A teacher-training program for colored schools. In Report of committee of investigation. *Jackson, Miss., State department of edu-*

cation, 1930. (Bulletin, September 1930, no. 61.)

SLATER FUND. Study of county training schools for Negroes in the South. *Charlottesville, Va., Slater fund, 1923.* 85 p. (Occasional papers, no. 23.)

Texas. TAYLOR, D. B. Henderson County training school, Malakoff, Tex. *Southern workman, 57: 232-33, May 1928.*

NIGHT SCHOOLS

See Evening Schools.

NURSES, SCHOOL

See also Auxillary Agencies; Health; Salaries, Nurses

PHILLIPS, FRANK M. Statistics of nurse training schools. *Washington, U. S. Government printing office, 1928.* Table B. p. 11-57. (U. S. Office of education. Bulletin, 1928, no. 2.)

NURSERY SCHOOLS

See also Kindergarten

DAVIS, MARY DABNEY. Cost of nursery school education. In Preliminary report of current practice in the organization and administration of nursery schools in the United States, for 1926-27. p. 11-16. Mimeographed. April 18, 1927.

Per-pupil costs for current expense and its subdivisions for different types of schools.

— Nursery-kindergarten-primary education, 1924-26. *Washington, U. S. Government printing office, 1927.* 46 p. (U. S. Office of education. Bulletin, 1927, no. 28.)

This biennial review includes comparisons of salaries of kindergarten with other teachers.

— and HANSEN, ROWNA. Nursery schools in the United States, 1931-1932. *Washington, U. S. Government printing office, 1932.* (U. S. Office of education, Bulletin, 1932, no. 9.)

STODDARD, GEORGE D. A survey of nursery school costs. Report for co-operating schools, auspices of the General education board. *University of Iowa, Iowa City, Iowa, 1931.* 6 p. mimeographed.

Based on questionnaire data from 60 schools, representing three types and various situations. Gives for each type of school, median and quartile figures for cost and annual replacement, for

total equipment and laundry, for total salaries, for staff meals, total for children's food, and tuition per child.

WHITE HOUSE CONFERENCE. Nursery Education. *New York, Century Co.* 1931. p. 40-44.

Gives sources of support and tuition rates of nursery schools.

OPERATION

COSTS

See also Operation Economies; Maintenance

BENNY, WILBUR E. Funding operating expenses, *Ohio schools*, 4:75, March 1928.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Operation costs per pupil in average daily attendance in cities, 1923. *Washington, D. C., National education association*, 1924. p. 38, 42, 46. (Research bulletin, vol. 2, no. 1-2, January, March 1924.)

North Carolina. **NOLLE, M. C. S.** Operation costs in the North Carolina public schools. *Raleigh, N. C., State department of education*, 1930.

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Pennsylvania. **DECKER, W. N.** School costs in Pennsylvania, comparative operation and maintenance costs. In Thirteenth annual schoolmen's week proceedings. *Philadelphia, Pa., University of Pennsylvania*, 1926. p. 233-41.

Virginia. **HOKE, R. K.** Plan and cost of operating the schools of Prince George County, Va. *Journal of the National education association*, 1924. p. 711-14.

ECONOMIES

See also Operation Costs; Maintenance Economies

ALT, H. L. Saving fuel costs in school heating. *American school board journal*, 78:54, May 1929.

BARBER, F. H. How Kansas City operates its school laundries. *Nation's schools*, 3:49-50, February 1929.

BELL, HOWARD A. Operation costs of the Gary plan. *School executives magazine*, 48:486-518, July 1929.

The costs of the work-study-play plan at Gary, Ind., 1927-28 are carefully analyzed and tabulated in relation to the services rendered by the various phases and departments of the Gary program.

Better lighting for school buildings. *American city*, 33:485, November 1925.

Checking sheet for janitorial work. *American school board journal*, 81:72, October 1930.

DALTHORP, CHARLES J. How to improve janitorial service in small city schools. *Nation's schools*, 6:25, July 1930.

Suggests an ascending salary schedule based on training and service as a method to attract efficient, intelligent janitors. Cites importance of the janitor in the school system and his influence upon health, determination of maintenance and insurance costs, and the teacher and pupil efficiency. Gives regulations upon which janitors will be entered, trained and paid.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter VI. Operation of the school plant. *University of Nebraska, extension division, Lincoln, Nebr.*, 1932. p. 88-122, 179-87. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

Iowa. **HOLY, T. C.** Relation of size to cost of operation in certain schools of Iowa. In National education association. Proceedings, 1924. *Washington, D. C., National education association*, 1924. Vol. 62. p. 706-11. Also in *Journal of rural education*, 3:317-22, March 1924.

LOVEJOY, PHILIP C. Securing efficient janitorial service. *Nation's schools*, 3:17, January 1929.

Describes the objective means used in the Hamtramck schools for employing custodians. The method eliminates the political and subjective element often used, determines whether the applicant has the qualities demanded of a building custodian or janitor, and involves application references, physical and mental examinations.

REEVES, C. E. and GANDERS, H. S. Selection, tenure and dismissal of school janitor-engineers. *American school board journal*, 80:53, February 1930.

A thorough discussion of the principles and procedures pertaining to the selection, promotion, tenure, and dismissal of school janitor-engineers. The author lists eight conclusions which, if put into practice, would be a complete plan for personnel administration.

ROBINSON, E. Standardizing the work and pay of school janitors in Columbus. *American school board journal*, 76:45-46, 138, June 1928.

STATISTICS

[These will be found in the State and city school statistics bulletins of the United States Office of education. See State Statistics; City School Statistics]

OUTSIDE ASSOCIATIONS

BUTTERWORTH, JULIAN E. The parent-teacher association and its work. *New York, N. Y., Macmillan co., 1928.* p. 52-54, 64-67.

Practical suggestions on for what purposes the association should and should not raise money.

LATHROP, EDITH A. State school improvement associations. *Washington, U. S. Government printing office, 1927.* p. 2-13. (U. S. Office of education. Rural school leaflet, 1927, no. 42.)

General description of the status of State school Improvement Associations in the United States, including sources of support.

U. S. OFFICE OF EDUCATION. Finances and scholarships and loan funds. The parent-teacher associations. 1924-28. *Washington, U. S. Government printing office, 1927.* p. 21-23, 25-27. (U. S. Office of education, Bulletin, 1927, no. 11.)

Purposes and amounts of expenditures and activities with scholarships and loan funds. Cites individual associations.

Financial work of parent-teacher associations. In *Parent-teacher associations at work. Washington, U. S. Government printing office, 1925.* (U. S. Office of education bulletin, 1925, no. 30.)

How funds are raised and for what expended.

PARENT-TEACHER ASSOCIATIONS

See Outside Associations

PAROCHIAL SCHOOL COSTS

Chicago. CUNNINGHAM, DANIEL F. School costs and savings to taxpayers. In Annual report of the Catholic schools, Archdiocese of Chicago, 1928-29. *Chicago, Ill., Archdiocese of Chicago, 1929.*

ORRIEN, R. E. Cost of parochial education in Chicago. *Journal of educational sociology, 2: 349-58, February 1929.*

This study of comparative per-pupil costs in public and Roman Catholic elementary schools of Chicago in 1926-27, shows that public schools cost \$106.30 more per pupil per year than parochial

schools. Teacher salaries were \$64.10 per pupil for public schools, as compared to \$8.18 in parochial schools. Other interesting comparisons.

CROWLEY, FRANCIS M. Salaries-fees. Rapid development of Catholic high schools in past decade. *Washington, D. C., National Catholic welfare conference, 1930.*

A section shows salaries paid teachers in Catholic schools, and the tuition range in Catholic secondary schools in 1928. The median annual salary paid women was \$500 as compared to \$1,000 paid to each man teacher in these schools. High-school tuition ranged from \$80 to \$175 per pupil per year.

FITZPATRICK, EDWARD A. Financial stewardship for Catholic colleges. In National Catholic educational association. Twenty-seventh annual report, 1930. p. 142-49.

Lay cooperation in the financial administration of Catholic colleges. In National Catholic educational association. Twenty-sixth annual report, 1929. p. 124-36.

NATIONAL CATHOLIC WELFARE CONFERENCE. Education costs compared. *Washington, D. C., National Catholic welfare conference, 1928.* p. 1. Editorial sheet, vol. 9, no. 2, August 1928.

A brief editorial on per capita costs in Catholic schools. Shows expenditure is much lower in these schools than in public schools. Annual per capita costs in parochial schools range from \$15 to \$20 as compared to a much higher figure in public schools. The Catholic Church expended \$35,952,800 for education in 1926.

Pittsburgh. CAMPBELL, PAUL E. Superintendent. School costs. In Parish schools of the diocese of Pittsburgh. Twenty-fifth annual report (1929-30). 1930, p. 12.

RYAN, CARL J. Financing the school. In The central Catholic high school. *Washington, D. C., Catholic university, 1927.* (Catholic university dissertation series.)

PAY-AS-YOU-GO

See Borrowing, When

PAY ROLL

BELL, A. H. Administering the school budget pay roll. *American educational digest and school executives magazine, 48: 105, November 1928.*

BOWMAN, L. L. Pay-roll procedure for the public-school system. *American school board journal, December 1929.* 79: 45-6.

REEDER, WARD G. The business administration of a school system. *Boston, Mass., Ginn and co., 1929.* Chapter 18.

Chapter 18 is a detailed description of pay-roll procedures. Gives general and specific instructions for salary payments in various types of schools and for various types of employees. Methods and forms to be used in pay-roll accounting supplement the discussion.

SMITH, HARRY P. Pay-roll accounting. In his *Business Administration of public schools. Yonkers, N. Y., World book co., 1929.* p. 181-97.

Chapter 8 deals with the functions and forms of pay-roll accounting procedure and presents outlines for several types of systems and practices.

STRAYER, GEORGE D. and ENGELHARDT, N. L. Pay-roll forms. *Albany, N. Y., C. F. Williams and son, 1923.* (School record series.)

WEED, F. E. and SMITH, HARRY P. Pay-roll procedures in city school systems. *American school board journal, 77: 39, December 1928, 77: 47, November 1928.*

PENSIONS

COSTS

Defense of a flat rate of sixty-five dollars a year. *Minnesota journal of education, 9: 668, December 1928.*

Gives a teacher's opinion on the \$65 annual payment flat-rate plan of the retirement salary payments and cites factors on both sides making it mutually fair.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Income and outgo for retirement systems in representative States. *Washington, D. C., National education association, 1924.* p. 84. (Research bulletin, vol. 2, May 1924.)

In answer to the inquiry of what teacher retirement systems cost, the statistics of payments by States into retirement funds, payments into these funds by teachers, total retirement fund incomes, amount paid in teachers' pensions, costs of administration, other expenses, and total expenditures of retirement funds in 14 representative States in 1922 are tabulated.

NORTON, JOHN K. Flat rate versus percentage retirement plans. *Sierra educational news, 26: 21, February 1930.*

Defines flat-rate and percentage-salary retirement plans, and outlines the arguments presented for and against each plan.

PHILLIPS, FRANK M. Fixed charges (pensions, insurance, contributions, contingencies). In *Statistics in State school systems, 1927-28.*

Washington, U. S. Government printing office, 1930. Table 25. p. 44-45. (U. S. Office of education. Bulletin, 1930, no. 5.)

Similar figures in corresponding bulletins for previous years.

STAFFELBACH, ELMER H. Retirement salaries: The differential principle. *Sierra educational news, 26: 28-32, January 1930.*

Cites facts and figures on relationship of teachers' salaries and retirement allowances under the flat rate and under the differential plan. Calls attention to the variance of living costs and purchasing power of the dollar under the flat rate plan.

U. S. OFFICE OF EDUCATION. Conclusion: Summary of tendencies and criteria. In *Pension systems for public school teachers. Washington, U. S. Government printing office, 1927.* p. 47-49. (U. S. Office of education. Bulletin, 1927, no. 23.)

GENERAL THEORY

See also Pensions, Teachers, General Treatment

ANTHONY, A. W. Difference between a living trust and an annuity agreement. *Christian education, 13: 194-98, December 1929.*

BUCK, GEORGE B. Procedure involved in the establishment of a pension system. In his *Pensions.* New York, N. Y., 1927. 16 p.

Information and suggestions by a consulting actuary, principally for cost phases, for employers desiring to establish pension systems in accordance with actuarial principles.

EPSTEIN, ABRAHAM. Pensions. In *The challenge of the aged.* New York, N. Y., Vanguard press, 1928. p. 175-79.

HOUSMAN, IDA E. Essentials of sound pension legislation. *American school board journal, 66: 55-57, February 1923.*

MCCAHAN, DAVID. Pension funds. In *State insurance in the United States.* Philadelphia, Pa., University of Pennsylvania press, 1929. p. 137-75.

MILLER, WILLIAM O. Pensions and insurance. *Association of university and college business officers of the Eastern States, 1928.* Appendix K.

Outlines a plan for meeting pension and insurance needs of educational institutions under three headings: Providing relief for temporary troubles, providing for the needs of the personnel and the family of the individual in case of death, and insuring the welfare of the personnel during old age.

MORRISON, HENRY C. The management of the school money. *Chicago, Ill., University of Chicago press, 1932.* p. 274-83, 293-314.

A theoretical treatment with practical illustrations of why pensions should be regarded as retirement pay and how to administer them effectively on this basis.

NATIONAL CIVIC FEDERATION, INDUSTRIAL WELFARE DEPARTMENT. State old-age pensions: Constructive proposals for prevention and relief of destitution in old age. *New York, N. Y., National civic federation, 1929.* 16 p.

Retirement and savings plan of U. S. rubber company dated May 1, 1931. *Personnel, 8: 3-11, May 1931.*

STEWART, BRYCE M. Pensions. In Financial aspects of industrial pensions. *New York, N. Y., American management association, 1929.* 24 p. Document no. 87.

Contains percentage cost figures, ways of estimating costs and numerous examples of how actual differed from estimator costs in various companies, both in this country and England.

U. S. DEPARTMENT OF LABOR. Bureau of Labor Statistics. Pensions. In Public service retirement systems. *Washington, U. S. Government printing office.* (U. S. Department of labor. Bulletin 1929, No. 477.)

Information on retirement systems for Government employees in the United States, Hawaii, Canada, and Europe. Chapter V deals with State teacher retirement systems.

LIBRARY

AMERICAN LIBRARY ASSOCIATION. Pensions for librarians in the United States and Canada. *Bulletin of the American library association, 24: 78-85, March 1930.*

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PLATOON SCHOOLS

ANDERSON, HOMER W. Comparative costs of platoon and non-platoon schools. *Platoon school*, 2: 170-75, December 1928.

Compares the use of teacher time, the number of pupils per teacher, the relative attendance, the cost of supplies and textbooks, the actual costs per pupil per year, corrected costs per pupil, costs per pupil hour, and the cost of buildings, in six nonplatoon schools of Denver, with similar items in platoon schools. The platoon schools show a considerable saving. Building economies loom greatest.

BELL, A. HOWARD. Operation costs of the Gary plan. *School executives magazine*, 48: 486-88, July 1929.

Compares offerings with costs of this platoon school system in detail. Costs are presented in 18 different units.

CASE, ROSCOE DAVID. The platoon school in America. *Stanford University, Calif., Stanford University press*, 1931. p. 229-43.

Shows, using relevant data, costs of the platoon school in comparison with the regular type organization. Shows savings which result from platoon organization under various items of school cost.

Detroit, Mich. The platoon school in Detroit. Detroit, Mich., 1923. (Detroit educational bulletin, 1923, no. 2.)

GERWIG, G. W. Platoon system of schools from standpoint of finance. In Proceedings of national association of public-school business officials, 1928. The association, 1928. p. 97-107.

KENNEDY, W. F. Economic values of the platoon type of school organization. *Pittsburgh, Pa., Board of education*, 1929. p. 19-20. Bulletin, 1929.

Points out the following advantages of the platoon school organization plan to pupils: Open air; shorter periods of sitting and standing; diversified interests; less nervous and mental strain; and the fostering of initiative and independence. Shows the economic advantage. Questions certain objections as contrary to experience.

RISLEY, JAMES H. Advantages of the platoon type of elementary organization. *School executives magazine*, 49, 556-57, August 1930.

A section of this article explains how the entire building is utilized during the entire school day, assuming a saving.

ROSSMAN, JOHN G. Comparative costs and work-study-play organization. *American school board journal*, 68: 53-54, June 1924.

SPAIN, CHARLES L. Comparative costs of platoon and nonplatoon school organizations. *Journal of educational research*, 11: 280-86, April 1925.

Shows that with the platoon system, as exemplified in Detroit, existing buildings can be used and at the same time the building capacity and number of pupil hours of instruction may be increased without additions to the cost of teacher service.

Costs. In his *The platoon school*. New York, Macmillan co., 1925. p. 193-212.

Traces evolution of the modern school. Shows economy resulting from platoon type of organization. Presents statistical tables showing costs per pupil of new building organized on the platoon and nonplatoon plans. Points out graphically and statistically savings in instructional space of the platoon school over the traditional school.

TIDWELL, C. J. Economic and administrative value of the platoon plan in junior high schools. In National education association. Addresses and proceedings, 1923. Washington, D. C., National education association, 1923. p. 988-99.

PLAYGROUNDS

See also Athletics; Physical Education; Stadia

Chicago's investment in playgrounds. *American physical education review*, 28: 482, December 1923.

Cost of construction and operation of outdoor pools for schools. *Playground*, August 1929.

DAVIS, L. W. An investigation into the conduct and financial support of playground and recreational activi-

ties in selected States. Master's thesis, 1931. *New York university, New York, N. Y.* 62 p. ms.

The purpose of the study was to determine the amount of legal support for the financing and conducting of out-of-school-hour programs on school property, and to determine if school buildings, grounds, equipment, and funds are being used without legal support.

DRESSLAR, F. B. and PRUETT, HASKELL. Rural schoolhouses, school grounds and their equipment. *Washington, U. S. Government printing office, 1930.* (U. S. Office of education. Bulletin, 1930, no. 21.)

Shows that a well-planned rural school building will not cost any more than a poorly planned one and warns boards to have reliable architects estimate school building costs before determining the amount of bond issue.

Methods of financing playgrounds and recreation facilities. *American city, October 1930.*

Examines three fundamental considerations and three points in policy arising in the financial administration of municipal recreations. Includes specific data from a number of cities. These practices may be applied to the financial administration of scholastic recreations.

PRINTING COSTS

PEEL, ARTHUR J. Cutting printing costs in school management. *American school board journal, 71: 42, 140, July 1925.*

Explains in detail how school superintendents may reduce printing costs about 50 per cent by having their various accounting forms printed from one set-up by a large press.

PRIVATE SCHOOLS

See also Parochial School Costs

HARTT, R. L. New trend in private school financing. *School and society, 33, 519-22, April 18, 1931.*

Appraises insurance endowments from alumni, issuance of bonds, and borrowing from banks, as methods of financing a modern private school. Concludes that a financial campaign, driven by experts, who can skillfully exact large gifts from able patrons, is the most "thoroughgoing and businesslike" method of financing private schools.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Private elementary and secondary school costs, 1923-24. *Washington, D. C., National education association, 1927.* Table 1. p. 10. (Research bulletin, vol. 5, no. 1, January 1927.)

FOREIGN

England. The income tax on British schools. *School and society, 25: 421-22, April 9, 1927.*

PROPERTY VALUE FOR SCHOOLS, STATISTICS

See also Building Costs, Statistics; Wealth Statistics

[These will be found in the State and city school statistics bulletins of the United States Office of education. See State statistics and city school statistics. Similar data frequently appear in the research bulletins of the National Education Association, traceable through the index at the end of each volume]

PUBLIC RELATIONS ON SCHOOL FINANCE

For public relations on any item, e. g., Salaries, see that head and its subhead of Public Relations. See also Reports; Value of Education.

Adequate taxation for adequate education. *Journal of the Ohio State teachers association, 2: 27-28, November 1924.*

ALEXANDER, CARTER. Public relations. In Review of educational research. Finance and business administration number, vol. 11, no. 2, April 1932, p. 113, 168-9. American educational research association, Department of. *National education association, Washington, D. C.*

Running review and bibliography, stressing period from 1923 to the fall of 1931.

School expenditures and the public. *Teachers college record, 26: 117-26, October 1924.*

Methods and items of school publicity are discussed. Outlines six types of expense information which should be presented to the public, and appraises publicity, salesmanship, and politics as methods of informing public opinion and securing its support.

ASSOCIATION FOR RETRENCHMENT IN PUBLIC EXPENDITURES. Sanctified squander. *Cleveland, Ohio, Association for retrenchment in public expenditures. Bulletin, no. 7.*

An example of extremely hostile publicity directed toward public school expenditures. Quotes from many and various sources.

Attack on school expenditures. *Elementary school journal, 28: 249-52, December 1927.*

A discussion of a bulletin entitled "Sanctified Squander," which was issued by the association for retrenchment in public expenditures. The bulletin makes an attack on the schools of the country, charging them with extravagant expenditures for fads and frills. Building programs and the curriculum seem to be the chief sources of contention.

BALLOU, F. W. Achievement of American education: Finance. In National education association. Pro-

ceedings, 1930. *Washington, D. C., National education association, 1930.* p. 685-90.

Deals with the increased cost of public education between 1910 and 1930, resulting from the extraordinary increase in school attendance and schoolhouse construction. Concludes that efforts to reduce appropriations for public education are likely to fail, because efficient public education costs more money than formerly and the people insist on increasingly efficient schools.

BARROW, JAMES P. Campaign of local 89 for adequate support of Atlanta's public schools. *American teacher*, 12: 12-14, March 1928.

BROOKS, E. O. The taxpayer's idea of school business administration. *School executives magazine*, 49: 553-55, August 1930.

A North Carolina college president reviews 11 years of State school finance in relation to educational progress. Notes mistakes and weakness and reviews educational contributions of the period. Emphasizes the need for better business administration of schools and cooperation with other agencies of the government.

BUCHER, H. M. Keeping the faith. *American school board journal*, 75: 42, December 1927.

BUCKINGHAM, B. R. Can we pay for education? *Journal of educational research, Ohio State university*, 9: 427-30, May 1924.

BURNOWS, A. S. The teacher, taxation, and school costs. *Washington education journal*, 3: 201-2, March 1924.

BUTLER, J. H. Our spendthrift schools. *Current history*, 26: 48-52, April 1927.

Summarizes the case against the so-called "Our Spendthrift Schools," and attempts to refute the arguments by presenting data on the costs of education in the United States for 1910 and 1920 to show, by means of comparison, that the increased costs of education, when properly considered, have not been greatly influenced by extravagance on the part of school authorities, but are due rather to the increased demands upon our schools.

CAMPBELL, H. S. The public school and public indifference. *American school board journal*, 78: 43-44, 152.

Can America afford education? *Journal of the National education association*, 16: 64, February 1927.

Can America afford public education? *American educational digest*, 43: 294-96, March 1924.

Can we afford public education? *Intermountain educator*, 19: 183-89, February 1924.

CARR, WILLIAM G. Public education in the South. *School and society*, 33: 488-95, April 11, 1931.

An analysis of the educational opportunities in Southern States as shown by various items of expenditures, attendance percentages, length of school terms. Discusses the probability that these opportunities may be further curtailed through ill-advised legislation and warns against those who would use the present economic depression as an excuse for retarding the development of public education.

CRABTREE, J. W. The fight to reduce school privileges. *School and society*, 19: 181-84, February 16, 1924.

Education demands consideration; first things first. *Georgia education journal*, 19: 24, April 1927.

Educational news and editorial comments. Advertising the advantage of education. *School review*, 31: 731-32, December 1923.

ENGELHARDT, FRED. The schools during economic depression. *American school board journal*, 83: 25-27, December 1931.

Indicates the fallacies underlying the common attacks on the schools and these issues which must be clearly understood and intelligently defended. The average citizen and school board member does not know the relative value of the school services, but is more interested in times of crises than ever before.

ENGELHARDT, N. L. and ENGELHARDT, FRED. Financial statements and reports. *In their Public-school business administration. New York, N. Y., Teachers college, Columbia university, 1927.* p. 452-507.

Chapter 20 discusses the purposes of financial accounting to the public and to school boards, kinds of financial reports essential to effective accounting, advantages, of uniformity of reports, 6 principles basic to preparation of financial reports, 13 principles governing the preparation of annual statements, and 8 techniques which will facilitate State and Federal financial reports. Chapter 21 presents 34 actual accounting forms which may be used in various phases of school accounting.

Publicity and school buildings. *In their Planning school building programs. New York, N. Y., Teachers college, Columbia university, 1930.* p. 483-517.

An unusually comprehensive chapter, presenting in detail, publicity techniques that may be used to gain public support for school building programs. Gives examples of successful methods for the advertisement of bond issues and tax needs. Reviews various plans for the organization of publicity campaigns, and avenues for publicity. Discusses continuous publicity, and the testing of public attitudes. Analyzes the defeats of school bond issues and lists 48 common reasons for failure.

- FARLEY, B. M.** What to tell the people about the public schools. *New York, N. Y., Teachers college, Columbia university, 1929.* (Teachers college, Columbia university. Contributions to education, no. 355.)
Examines 337 appealing school items appearing in newspapers. Reveals types of school information educators may use to secure the financial and general support of the public.
- FOSTER, M. A.** Education pays the state. *Washington, U. S. Government printing office, 1925.* 27 p. (U. S. Office of education. Bulletin, 1925, no. 33.)
An attempt to find out whether or not education pays the State. Compares expenditures for education in 1910 with apparent results as shown in terms of the relative amount of illiteracy in 1910 and 1920. Objective data indicate that expenditures for education tend to increase income and wealth, to decrease illiteracy, and to raise standards of living.
- FOWLKES, J. G.** Improving the financial support of public schools. *Nation's schools, 6:92, December 1930.*
- GRIER, B. M.** How to secure financial help from the community for our schools. *Georgia education journal, 23: 21-24, December 1930.*
- GRILL, GEORGE W.** An educator looks at salesmanship. *American school board journal, 83: 110, 113, July 1931.*
- HAMMONDS, CARSLIE.** Who should pay for education? *Kentucky high school quarterly, 12: 77-79, April 1926.*
- HENZLIK, F. E., RICHARDS, W. M., and others.** Practical economies in school administration. Chapter XIV. The value of well-trained leadership; steps in securing it. *University of Nebraska, extension division. Lincoln, Nebr., 1932.* p. 161-67, 201. (University of Nebraska publications educational monograph, no. 3, 1932. 212 p.)
The necessity for well-trained leadership and specifically what it can do to secure more public confidence in schools in these trying times.
- HUNTER, F. M.** Efficient expenditures of school moneys. *American school board journal, 76: 43-44, May 1928.*
- JANES, EDWIN W.** The public schools and the public pocketbook, tax reform or school retrenchment the issue, asserts laymen. *Washington, Education journal, 9: 135-36, 150-51, January 1930.*
States that rising school tax rates and rising school costs indicate that the general property tax will not stand the strain of supporting a much larger educational program and that unless the educational program is to be curtailed a new source of revenue must be developed.
- JONES, R. G.** "Sanctified squander" in Cleveland. *Journal of the National education association, 1928.* 16: 233-34.
The Superintendent at Cleveland, Ohio, makes a forceful reply to the original pamphlet, with some telling, humorous touches.
- KAUFFMAN, J. H.** Why public institutions lack funds. *Ohio schools, 4: 213-14, July 1926.*
- Keeping up with the schools.** *School and society, 33: 334, March 7, 1931.*
In relation to current economic conditions in the South, the National Education Association analyzes the professional effect the threatened act of closing schools for one year would have upon teachers, and the social injustice of such action to the children of the State. Analyzes the importance of continuous school operation.
- KLINE, AARON.** Elementary principal and the community. 1932 yearbook. National education association, department of elementary school principals. *Washington, D. C., National education association, 1932.*
- LEEOH, D. R.** Who should pay for the schools? *Nebraska education journal, 10: 122, March 1930.*
- McMILLIN, MOE.** A study of the cost of a high-school education to the parent. Master's thesis, 1928. *University of Southern California. Los Angeles, Calif.*
- MILLER, CLYDE R. and CHARLES, FRED.** Publicity and the public schools. *New York, N. Y., Houghton Mifflin, 1924.* p. 43-45, 162, 146.
Covers the methods of money-getting and money-spending activities for publicity within the school system and the effect of maintaining proper relationship between the school and the public on school financing.
- MOEHLMAN, ARTHUR B.** Public information. In his *Public-school finance.* *New York, N. Y., Rand McNally, 1927.* p. 225-28.
- MONTANA TAXPAYERS' ASSOCIATION.** Where the Montana tax dollar goes. *Helena, Mont., Montana taxpayers' association, 1925.*
- More sanctified squander.** *American educational digest, 48: 168, December 1928.*
An editorial on the opposition to a program for progressive, constructive, and adequate educational opportunities for all. While educational expenditures increased 112 per cent, 1913-1925, they have not increased as much as the average income.

NATIONAL EDUCATION ASSOCIATION. DEPARTMENT OF SUPERINTENDENCE. Ninth yearbook. Fiscal articulation of educational units through informal and nongovernmental agencies. *Washington, D. C., National education association, 1931.* p. 310-14.

A consideration of conferences of institutional officials, councils of State educational associations, conventions, lay organizations, and informal methods and agreements. Discusses these questions in relation to importance as forces facilitating the fiscal articulation of educational units.

RESEARCH DIVISION. Analysis of the increase in expenditures for public education, 1913-23. *Washington, D. C., National education association, 1924.* p. 6, 15-19. (Research bulletin, vol. 2, no. 1-2, January-March 1924.)

Can the nation afford to educate its children? *Washington, D. C., National education association, 1923.* 72 p. (Research bulletin, vol. 1, no. 2, March 1923.)

A study of expenditures for education; expenditures for candy, tobacco, soft drinks, cosmetics, confections, luxury services, joy riding are compared with those for education and with National wealth and National income in an attempt to answer the charge of extravagant educational expenditures. Analyzes reasons for increased school costs are analyzed. Tabulates statistics of school enrollment increases and money depreciation.

Can the nation afford to educate its children? *Washington, D. C., National education association, 1928.* p. 258-92. (Research bulletin, vol. 6, no. 5, November 1928)

Facts concerning school costs and the ability of the Nation as a whole to support education, as indicated by wealth, income, and certain other considerations based on data for the years 1913 to 1926, inclusive.

Do good schools pay? *Washington, D. C., National education association, 1923.* p. 299-306. (Research bulletin, vol. 1, no. 4, September 1923)

In an attempt to ascertain how and in what terms good schools pay, this article investigates the educational attainment, interest in public affairs, general intelligence, persons of leadership, earnings, savings, and social progress of the populations of the various States. Facts force the conclusion that those States with good schools rank highest in every respect mentioned.

Investing in public education. *Washington, D. C., National education association, 1930.* p. 168-217. (Research bulletin, vol. 8, no. 4, September 1930)

A rather extensive study of the wealth, income, and school support in the

United States. Tables show tax collections, income, and school costs in individual States, 1928.

Why have school costs increased? *Washington, D. C., National education association, 1924.* p. 5-19. (Research bulletin, vol. 2, no. 1-2, January, March 1924)

NORTON, J. K. The cost of education from the viewpoint of the schools. *Washington, D. C., National education association, Department of superintendence, 1930.* p. 218-20. (Abstract)

Good general article stressing the conservation of educational resources by the schools, legitimacy of school costs, the small and stationary percentage of income devoted to schools, reasonableness of costs in relation to size and character of work expected, and the fact that so far no way has been found to decrease school costs materially without threatening the integrity of the school itself.

One hundred and twenty-two reasons why taxpayers boost school costs; 30 ways educators may reduce them. *Public service, 376,* March 25, 1924.

PITTINGER, B. F. Financial aspects of school publicity. In *his* An introduction to public-school finance. *New York, N. Y., Houghton Mifflin co., 1927.* p. 209-33.

POWELL, WHITON. How to make and use financial statements. *Ithaca, N. Y., New York State college of agriculture, 1928.* 53 p. (Cornell extension bulletin, no. 174, October 1928.)

REEDER, WARD G. Public relations or publicity. In *his* The fundamentals of public school administration. *New York, N. Y., Macmillan co., 1930.* p. 534-63.

Points out need for proper publicity concerning the aims, the needs, the management, and the accomplishment in order to insure adequate financial support.

Sanctified squander. *School executives magazine, 49:344,* March 1930.

Set a woman to catch a tax. *American school board journal, 77:42,* 128, August 1928.

Describes a method used to interpret school costs to the public and contends that each school board should have one woman member.

SMITH, HARRY P. Financial reports and publicity. In *his* Business administration of public schools. *Yonkers-on-Hudson, N. Y., World book co., 1929.* p. 165-80.

Gives five principles of financial accounting in relation to publicity purposes and types of financial statements which will serve for both accounting and pub-

licity. Discusses Federal, State, county, and city reports and lists 20 techniques of school publicity.

STANTON, B. F. Administrators reaction to "sanctified squander." *Ohio school*, 7: 183-84, May 1929.

STRAYER, GEORGE D. Adequate support of education in the condition of an effective service. *School and society*, 35: 373-76, March 19, 1932. Also in National education association. Department of superintendence official report, 1932. Washington, D. C., February 1932. p. 83-86.

A plea for adequate support of our schools and the improvement of educational services.

The contribution of public education to the welfare of the nation. *School and society*, 34: 307-11, September 5, 1931.

A considerable showing of items to indicate that public education has made the kind of contributions expected of it as the "foundation upon which the democratic State is built." Suggestions for future.

THRELKELD, A. L. The attitude of the public mind toward taxation. *Bulletin of the classroom teachers association*, 16: 15, June 1929.

TOBB, W. H. What citizens know about their schools. *New York, N. Y., Teachers college, Columbia university*, 1927. 86 p. (Teachers college Columbia university. Contributions to education, no. 279.)

This scientific analysis of questionnaire returns indicates that citizens on the whole have little idea of what the community is spending on education, the minimum wage paid teachers in any department, or the community's relative ability to support education.

WEAVER, OLNEY S. A successful financial campaign. *American school board journal*, 75: 150, July 1927.

What one newspaper has done to show the cost of government. *Democrat and Chronicle, Rochester, N. Y.*, 1924.

What price education? *Missouri school journal*, 45: 8, January 1927.

Compares the expenditure of \$2,000,000 on a prize fight lasting 30 minutes with the expenditure of \$1,500,000,000 to educate 30,000,000 children for a fight that will last approximately 30 years.

Work of the finance committee of the Colorado education association. *Colorado school journal*, 45: 16-18, September 1929.

The methods of deriving the cost of equalizing a minimum program of education are outlined and presented informally to the public in a diagram and graphically.

PUPIL COST ACCOUNTING

Fundamentals of pupil cost accounting. *American school board journal*, 81: 55-56, July 1930.

A discussion covering the requirements, fundamentals, importance, and analysis of an accurate per-pupil cost system, properly supported with data in scientific and accurate form.

Michigan. STATE TEACHERS ASSOCIATION. COMMITTEE ON UNIFORM CHILD ACCOUNTING AND UNIT COSTS. A uniform financial procedure for the public schools of Michigan. *Lansing, Mich., State teachers association*, 1924. 40 p. (Bulletin, no. 4, pt. 1.)

A uniform financial procedure for the public schools of Michigan having a population of 2,000 or less. *Lansing, Mich., State teachers association*, 1925. 16 p. (Bulletin, no. 4, pt. 2, April 1925.)

National association of public-school business officials. Committee on public-school pupil cost accounting. Chairman, Frederick D. Chambers, Auditor of Board of education, New York city.

This committee, at work on a report already drafted for preliminary criticism, aims "to coordinate the work of previous investigators, to test and apply the principles of school accounting authorities, and to amplify and clarify where this is deemed helpful."

Pupil finance. *American educational digest*, 44: 403-5, May 1925.

PURCHASING ECONOMIES

Adopts one-price policy: American seating company takes advanced position in school equipment industry. *School executives magazine*, 48: 411-12, May 1929.

Presents the advantages the adoption of a 1-price policy by equipment manufacturers will give school executives, and suggests methods by which school executives may cooperate with manufacturer of equipment to insure more efficient school equipment at lower prices.

Contracting for schoolhouse equipment: the experiences of a business manager. *American school board journal*, 79: 37, December 1929.

DEMERY, R. C. Purchase of coal for schools. *American school board journal*, 79: 45, August 1929.

Aims to aid in the purchase and selection of suitable coal and to explain the advantages and disadvantages of certain grades and types. Discusses care of the heating plant in general.

ERICKSON, E. On buying equipment. *Industrial education magazine*, 29: 345-46, April 1928.

GANDERS, HARRY S. Purchase and distributing of textbooks and supplies. In *Personnel and organization of schools in small cities*. Washington, U. S. Government printing office, 1926. p. 18-19. (U. S. Office of education. Bulletin, 1926, no. 6.)

KNOX, ROSE. General rules for buying. In *her School activities and equipment*. New York, N. Y., Houghton Mifflin, 1927. p. 319.

Principles and rules for buying school supplies and equipment are concisely presented, giving consideration to time and place of purchase, methods of obtaining supply house addresses, and the ethics of business relationship.

LINDSAY, E. E. Purchasing costs. In *his Problems in school administration*. New York, N. Y., Macmillan co., 1928. Chapter V.

LOVEJOY, PHILIP C. Laying in the winter's coal supply for the school system. *Nation's schools*, 4: 79, August 1929.

Discusses adequate methods of purchasing coal for school system, analyzing two types: (1) type of heating units operated and bids on coal which give maximum efficiency; (2) exhaustive study by maintenance engineer, installers, and local industrial engineers determining type of coal for best heat value. Detailed account of Hamtramck school specifications, delivery conditions, and payment periods.

MARTIN, F. F. Economy in purchasing. *Sierra educational news*, 23: 151-52, March 1927.

MCCLINTON, J. W. Some uneconomic factors in school buying. *School executives magazine*, 51: 17-18, September 1931.

A brief analysis of some of the more widely used methods in purchasing school supplies and equipment. Several concrete examples illustrate abuse of bidding and sampling.

MOEHLMAN, ARTHUR B. An accounting device that assures flexibility in purchasing. *Nation's schools*, 5: 67-69, May 1930.

Presents a general discussion of a complete accounting and purchasing procedure, logically and completely organized, to assure speed, freedom, and flexibility, so essential both to efficiency and to economy. The "general stores" procedure regulates the buying of school supplies at other times than the peak months of July and August, and it may assist in stabilization.

Typical transaction for supplies and equipment when dispensed through the storeroom. In *his Public-school finance*. New York, N. Y., Rand McNally, 1927. Diagram 33. p. 419.

This diagram shows the typical transaction for supplies and equipment when dispensed through the storeroom.

PROCTOR, ARTHUR. Safeguarding the school board's purchase of architect's working drawings. *New York, N. Y., Teachers college, Columbia university*, 1931. p. 173. (Teachers college, Columbia university. Contributions to education, no. 474.)

RECORDS

Material on records for any financial procedure, e. g., Payroll Accounting will often be found in references under that head. See also Reports.

ENGELHARDT, N. L. and others. Financial records of a school system. Washington, D. C., National education association, 1927. p. 233-44. (Research bulletin, vol. 5, November 1927.)

A description of the forms for the minute book, unusual budget, initial records, pay rolls, distribution of expenditures, general ledger, property ledger, treasurer's register, revolving fund accounts, stores accounting, indebtedness, and internal accounting which have been recommended by the U. S. Office of Education and the National Association of Public-School Business officials.

RECREATION

NORTON, J. K. Recreation expenditures per capita in cities over thirty thousand in population in 1928. Washington, D. C., National education association, 1930. p. 200. (Research bulletin, vol. 8, no. 4, September 1930.)

A graph shows the increase of per capita expenditures for recreation in cities of more than 30,000 population from \$0.65 in 1911 to \$1.40 in 1927.

REPORTS

Material on reports for any financial procedure, e. g., Cost Accounting will often be found in the references under that head. See also Public Relations; Records.

ALEXANDER, CARTER. Index for a school report. *New York, N. Y., Teachers college, Columbia university*, 1927.

Useful as a check list of finance items that should go into such a report.

CLARK, ZENAS R. The recognition of merit in superintendents reports to the public. *New York, N. Y., Teachers college, Columbia university*, 1930. (Teachers college, Columbia university. Contributions to education.)

Analyzes 95 city school superintendents reports and evolves criteria and principles of school reporting which will make financial reports effective and appealing to the public. Makes specific recommendations for improved reports.

Comparable school statistics. *Elementary school journal*, 29: 723-24, June 1929.

A brief treatment of comparable school statistics emphasizing the need or uniform financial reports. Quotations are given from United States Office of Education, Bulletin 1928, no. 24, Report of Committee on Uniform Records and Reports.

ENGELHARDT, FRED. Fiscal statements showing indebtedness. *American school board journal*, 73: 54-55, 43-44, August 1926.

Discusses the need of clear fiscal statements regarding school debt, 12 essential features of school bonded debt statements, 7 features of sinking fund statements, important funded debt ratios, the relationship between debt plans and current educational programs, some case studies, and statements of temporary loans.

The balance sheet in public-school reports. *American school board journal*, 71: 40-42, 140-50, August 1925.

Discusses financial conditions, annual financial reports, the balance sheet, funds, the general fund, building funds, the assets of a school district, property as an asset, assets and liabilities of the general fund, building fund balance sheet, bonded indebtedness and the balance sheet, and the consolidation of the balance sheet. Some balance sheet forms are reproduced.

FOSTER, EMERY M. Report of committee on uniform records and reports. *Washington, U. S. Government printing office*, 1928. (U. S. Office of education. Bulletin 1928, no. 24.)

Presents a complete set of forms for reporting receipts and expenditures.

GLOVER, O. S. and HALVERSON, J. J. Superintendent's monthly report to the board. *American school board journal*, 80: 50, May 1930; 65, June 1930.

LEAVENWORTH, P. E. Financial statements as a means of control. *American school board journal*, 78: 43-44, March 1929.

Analyzes the purpose of the balance sheet and the value of liability records. Explains how the balance sheet and complete liability records constantly clarify the financial status of the school system.

PERRIN, H. AMBROSE. The school budget report. *American school board journal*, 69: 74, October 1924.

POWELL, WHITON. How to make and use financial statements. *Ithaca, N. Y., New York State college of agriculture*, 1928. 53 p. (Cornell extension bulletin, no. 174, October 1928.)

SHAW, FRANK L. Salaries in reports. In *State school reports*. *New York, N. Y., Teachers college, Columbia*

university, 1927. 142 p. (Teachers college, Columbia university. Contributions to education, no. 242.)

The historical development and purpose of school reports, chiefly of annual and biennial reports of State departments of education. Views of their present status, analyzes and critically evaluates them. Includes and presents in a readable form, criteria for judging their merits.

SMITH, HARRY P. Business administration of public schools. *Yonkers-on-Hudson, N. Y., World book co.*, 1929. p. 165-80.

Discusses in detail the principles and techniques of coordinating school financial reports with publicity programs. Analyzes State laws relative to school reports and types of financial statements and presents five principles of financial reporting. Lists and evaluates effective agencies of school publicity. Outlines a model publicity program and gives a selected bibliography.

WEBER, OSCAR F. Problems in public-school administration. *New York, N. Y., Century co.*, 1930. Chapter XII.

RESEARCH

ECONOMIES

California. Research economies. In *California schools, State department of education*. *Sacramento, Calif.* March 1932. vol. 3, no. 3, p. 69-70.

TECHNIQUES

See also Costs, Methods of Calculating and Index Numbers. For research techniques for any specific phase, e. g., Budget, see references under that head, some of which are likely to include discussions of pertinent techniques.

ALEXANDER, CARTER. Research and survey techniques. In *Review of educational research*. Finance and business administration number, vol. II, no. 2, April 1932. p. 114-15, 169-70. American educational research association, Department of National education association, *Washington, D. C.*

Running review and bibliography of research and survey techniques used in school finance between 1923 and 1931.

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STRAYER, GEORGE D. The work of the Division of field studies. *Teachers college record*, 33: 113-15, November 1931.

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See also Revenues, School, Statistics

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NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Proposals for changes in the Federal internal revenue system. *New York, N. Y., National industrial conference board*, 1927.

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See also Taxation, General

ALEXANDER, CARTER. Revenues and taxation. In Review of educational research. Finance and business administration number, vol. 14, no. 2, April 1932, p. 108-12, 166-68. American educational research association, Department of National education association, Washington, D. C.

Running review and bibliography of researches in this field, stressing those from 1923 to fall of 1931.

ALLEN, WILLIAM H. Irrigation vs. cloudburst in getting money. *American school board journal*, 77: 74, 76, July 1928.

ANTHONY, A. W. Six sources of support. *Christian education*, 13: 572-75, May 1929.

BRUCE, W. C. Future outlook in financing public schools. In National association of public-school business officials. Proceedings, 1930, p. 170-75.

Considers the source, the volume, and the distribution of funds. The study also attempts to clarify our thinking concerning the sources of school support, and the exigencies and problems that attend such support.

CALLAHAN, JOHN. Sources of income for the public schools. *Wisconsin journal of education*, 58: 309-10, April 1926.

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Points out that the percentage of population, which is of school age, is a major factor in the effort a district will have to make to support an adequate program of education. Includes data to show the varying percentages of children of school age in the various States.

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CUBBERLEY, E. P. Funds and taxation. In his State school administration. *Boston, Houghton Mifflin*, 1927, p. 403-49.

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- of the National Tax Association, methods of State aid; the State's share of educational costs, budgets, tax levies, fiscal independence, and recent studies in an effort to devise an effective theoretical and technical basis for the administration of a State school taxing system.
- Education given greater support since the world war. *Nation's schools*, 3: 41, May 1929.
- ENGELHARDT, FRED. The administration of schools and financial support. In his *Public-school organization and administration*. New York, N. Y., Ginn and co., 1931. p. 492-508.
- Makes a general examination of State subventions, Federal taxes, local taxes, tuition, private contributions, school fees, service charges, and bonds as sources of school revenues.
- JUSTENSEN, V. Where the money comes from. *Wallace's farmer and Iowa homestead*, 55: 606-7, March 22, 1930.
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- Financing public education. *American school board journal*, 79: 41-43, 142, July 1929.
- MORRISON, H. C. Financing the rural school. In *National society for study of education*. Thirteenth yearbook, 1931. Bloomington, Ill., Public school publishing co., 1931. Pt. I. p. 221-38.
- Presents evidence and arguments to support a recommendation for a revised tax system which will tap all the resources of the various States, and a consolidation of State resources into a statewide educational program.
- School revenues. *Chicago, Ill., University of Chicago*, 1930. 242 p.
- Reviews the economic and financial foundation of the school, its historical relations to the State, sources of school revenues; the theory of the State as the financial and administrative unit of education, attempts at equalization, Federal, State, and local educational obligations, and kinds of taxation. Includes the definition that taxation is a payment for service rendered to society by the State and discusses property, income, excises, corporation, capitation, inheritance and severance taxes, customs, duties, licenses, assessments, and public service charges. Points out the place of the property and income tax in a sound taxation system.
- NATIONAL EDUCATION ASSOCIATION. School revenues and new methods of taxation studies in State education administration. Washington, D. C., National education association, 1930. 10 p. (Study no. 2, January 1930.)
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- PITTINGER, B. F. Sources of public-school revenues. In his *An introduction to public-school finances*. Boston, Mass., Houghton Mifflin co., 1925. p. 332-64.
- Sources of funds for education. *School and society*, 32: 386-87, September 20, 1930.
- SOPER, W. W. Sources of productive school revenue. *School executives magazine*, 50: 331-33, March 1931.
- STRAYER, GEORGE D. Administration and support. *American educational digest*, 44: 549-51, 566, August 1925.
- Reviews the development of the county unit, the junior high school, compulsory attendance, better buildings, broadened curriculum, and vocational education, as significant educational developments. Discusses tenure, pensions, supervision, surveys, research, financial support, accounting, and public confidence, as guiding principles of further progress.
- Supporting public education and distributing school funds in an attempt to help schools through their financial crisis. *School executives magazines*, 51: 76, October 1931.
- A view of Federal aid, notes on a proposal for distributing Florida State aid on an instruction basis, and on the Arkansas antideficit law.
- SWIFT, F. H. Federal and State policies in public-school finance in the United States. New York, N. Y., Ginn and co., 1931. 472 p.
- Gives information and evaluation of practices in raising school revenues that are invaluable for all who are to determine State and Federal policies on financing education. Covers the field thoroughly for both past and present, with separate chapters on typical systems of school support in Arkansas, Delaware, Massachusetts, Utah, and Wisconsin. The presentation is true and fair, although many of the data are several years old.
- New sources of school revenue needed. *Sierra educational news*, 20: 22-23, November 1930.
- Discusses the merits and weaknesses of new types of taxes for school revenue and names States having such taxes. Asserts that the graduated net personal income tax is regarded by all authorities in the field of public finance as one of the fairest and soundest taxes in existence.
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intendence. Ninth yearbook, 1931. Washington, D. C., National education association, 1931. p. 322-39.

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WEBER, OSCAR F. Cost of public education and sources of public-school revenue. In his Problems in public-school administration. New York, N. Y., Century co., 1930. Chapter XVI. (Century education series.)

WERNER, J. C. Variability of school support. *School of education journal*, 2: 108-10, May-June 1927.

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See also Business Management; Safeguarding Funds

ANDERSON, W. American city government. New York, N. Y., Henry Holt and co., 1925. Chapter XXI.

This chapter presents nothing revolutionary, but deals only with the steady extension of tax policies already agreed upon generally by students of municipal finance.

LOVEJOY, P. C. Administering revenue funds other than taxes. *Nation's schools*, 5: 81-82, February, 61-64, March, 1930.

These articles discuss policies, forms, and procedures useful in accounting for and administering internal accounts (often called extracurricular activity funds). Gives detailed suggestions of a practical plan.

SOPER, WAYNE. Forecasting school revenues. *School executives magazine*, 48: 339-41, 368.

Discusses per-pupil wealth, using four methods to show what population a community will have and the application of each to school revenue. Describes three methods of property valuation forecasts.

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Bequests and gifts for education and other public purposes. *School and society*, 33: 81, January 17, 1931.

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EMEREE, EDWIN R. Julius Rosenwald fund: A review to June 30, 1928.

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KING, WILFORD I. Trends in philanthropy. 78 p. *National Bureau of economic research*, 51 Madison Avenue, New York City.

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LATHROP, E. A. Receipts for maintenance of executive offices, amounts raised and expended, repairing, supplementing teachers' salaries, buying equipment, etc., in South Carolina. In State school improvement associations. Washington, U. S. Government printing office, 1927. Table 2. p. 12-13. (U. S. Office of education. Rural school leaflet, no. 42, 1927)

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Proposed gifts of Mr. DuPont to the schools of Pennsylvania. *School and society*, 81:659-60, April 26, 1930.

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An examination of the legality of various incidental fees of public schools through an analysis of school laws and court decisions. The legality of matriculation, tuition, heat, light, water, laboratory, library, Y. M. C. A., and athletic fees is discussed. The status of illegal fees is also discussed.

WILLIAMS, PIERCE, and CROXTON, F. E. Corporation contributions to organized community welfare services. *National bureau of economic research*, 51 Madison Avenue, New York City. 347 p.

Covers proportions going to different interests in nearly 150 American cities, gives relative contributions to community chests by various industries, considers contributions in cities in which corporations have interests, and presents data on corporation donations to war service appeals.

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State gasoline tax for the support of public schools in Texas. Discusses three attitudes which the public may adopt and charges teachers and school boards with the responsibility of seeing that they adopt the right one.

MATHEWS, WINIFRED. Relation of taxation to the problems of the teacher. *Pittsburgh school bulletin*, 22: 533-35, March 1929.

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STEVENSON, P. R. Campaign publicity for schools. *Columbus, Ohio, Ohio State university*, 1926. 59 p. Chapter III. *Bulletin (Ohio state university)*, 1926.

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SCHOOL STATISTICS

[School income and revenue statistics classified by sources for individual States and cities appear regularly in bulletins of the United States Office of education. See *State School Statistics*; *City School Statistics*. Many valuable statistics of yields from various taxes, both actual and potential, appear from time to time in the research bulletins of the National education association. Example, page 51 of vol. 5, no. 1, January 1927. The items can be located through the index issued at the end of each volume. The United States Bureau of the Census gives school revenue statistics in its *Financial Statistics of Cities* (latest in print, 1928) and *Financial Statistics of States* (latest in print, 1929)]

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MARRS, S. M. N. State school support. *Journal of education*, 99:428-29, April 17, 1924.

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NOBLE, M. C. S., jr. New problems in public school finance. *American school board journal*, 83:32, 80, November 1931.

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— KINCAID, H. The permanent State school fund of Arizona. Unpublished Master's thesis, *Library, University of Arizona*, 1932.

— TUPPER, C. RALPH. A survey of the Arizona public-school system. *Phoenix, Ariz., State board of education*, 1925. 112 p.

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— HILL, A. B. Financial support of education in Arkansas. Four years with the public schools in Arkansas, 1923-27. *Little Rock, Ark., State department of education*, 1926. p. 530-605.

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RETIREMENT COSTS

See Pensions, Costs

RURAL

AID

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COSTS

See also Consolidation Costs; Instruction Costs, Rural; Rural, County Unit, Costs; Supervision Costs; Transportation Costs

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when carried into rural districts. Calls attention to the need for a practical rural curriculum and an equitable distribution of the tax burden.

SUPPORT

See also Rural County Unit, Support; Rural, General; Taxation; Support

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KETLER, FRANK C. Reserve funds in public-school finance. *New York, N. Y., Teachers college, Columbia university, 1931.* 77 p. (Teachers college, Columbia university. Contributions to education, no. 456.)

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— Safeguarding school board deposits. *American school board journal*, 82: 37-39; February, 43-44, April, 47-48, May 1931.

Methods for safeguarding school funds are analyzed in a series of three articles covering the dangers of bank failures, the basis for selection of public depositories, the liability of public officials, and methods and types of financial security. Guaranty funds and sinking funds as a means of financial protection, and various legal rights of preference in the liquidation of the funds of solvent banks are examined, as a result of which four principles for the protection of public deposits are listed. Tables charting the number of bank failures in various States, 1921-1929, and analyzing the legislative provisions for the security of school funds supplement the discussion.

— Safeguarding school funds, 1929. *New York, N. Y., Teachers college, Columbia university, 1929.* 187 p. (Teachers college, Columbia university. Contributions to education, no. 387.)

Analyzes causes for school fund losses, makes a thorough research into the legal

procedures of using surety bonds as safeguards for school funds, and designs a procedure for selecting sound depositories for school funds. Makes seven definite recommendations and suggests further researches.

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MACKALL, LUTHER E. A handbook on fidelity and surety bonds. New York, N. Y., *Metropolitan casualty insurance co.*, 1924. 133 p.

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PETERSON, J. A. Should a bank cashier act as a school treasurer? *American school board journal*, 83: 24, 90, December 1931.

Relates the interesting and unfortunate experiences of a school district in failing to safeguard its funds properly.

Protecting public-school funds at all times. *Nation's schools*, 7: 90-92, April 1931.

A detailed account of an actual situation in which school-board funds and school-children's savings deposits were threatened with loss. Complications were encountered in trying to find a means of safeguarding that would be fair to the school and to the depository. The various plans considered and the final adopted plan are described.

QUENELLE, BERTRAM P. How to protect school funds. *School executives magazine*, 51: 302-5, March 1932.

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ROGERS, G. A. Why lose money on public funds in banks? *American bankers association journal*, 18: 606, March 1926.

SMITH, W. R. School depository and school treasurer. *American school board journal*, 80: 67, May 1930.

STEVENS, DAN V. Status of the last depositors bank guaranty law. *American bankers association journal*, 21: 433-34, November 1928.

TOWNER, R. H. The scientific basis of fidelity and surety rates. New York, N. Y., *Towner rating bureau*, 1924. 12 p.

United States fidelity and guaranty. Bank depository bonds. *Weekly underwriter*. 117: 649-55, September 1927.

SALARIES

[This section contains only references giving more than statistical data. Salary statistics on city teachers, higher education, and teacher training are noted under these subheads in this section. For statistics on other different classes of workers, e. g., business managers, superintendents, or music supervisors, see Salaries, Statistics.]

ATTENDANCE OFFICERS

LIEBLER, C. C. Qualifications and compensation of persons charged with the enforcement of compulsory education. *Elementary school journal*, 27: 695-706, May 1927.

BIBLIOGRAPHY

CARE, WILLIAM G. Teachers' salaries: A guide to literature and problems. *Sierra educational news*, 26: 22-27, June 1928.

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NATIONAL EDUCATION ASSOCIATION. Selected bibliography of current thought on teachers salaries. Washington, D. C., *National education association*, 1925. 71 p. (Research bulletin, vol. 3, no. 1-2, 1925.)

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Teachers' salaries. In Review of educational research. Teacher personnel. Washington, D. C., *American educational research association, National education association*, 1931. p. 86-91, 145-47. (Review of educational research, vol. 1, no. 2, April 1931.)

Covers researches to November, 1930, to find out and report the prevailing situation and to improve schedule making. Has a bibliography and cites previous bibliographies.

CITY STUDIES

See also Salary Schedules

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— Report of committee on the study of salaries in the Cincinnati public schools. *Cincinnati, Ohio, Board of education, 1926.* 59 p.

DEFFENBAUGH, W. S. Some recent movements in city school systems. *Washington, U. S. Government printing office, 1925.* p. 4-6. (U. S. Office of education. Bulletin, 1925, no. 27.)

Includes teachers' salary schedules, improvement of teachers in service, sabbatical leave, and improved housing conditions. Points out progress.

LOS ANGELES BOARD OF EDUCATION. Teachers' salaries in Los Angeles city elementary and high school districts. *Los Angeles, California, Board of education, 1931.*

Minneapolis. MEEHER, ROYAL. A study of costs and standards of living of Minneapolis teachers in relation to their salaries. *Minneapolis, Minn. Central committee of teachers' associations, September 1926.* 39 p.

New York City. CROMWELL, LINCOLN, and others. Report on teachers' salaries. New York City. March 14, 1927. 21 p. (Copies obtainable, if at all, through Mayor's office, New York city.)

This is the mayor's committee study, directed by W. C. Bagley, instituted as a check on the citizens' committee study entered under McGaughy, J. B.

— MCGAUGHY, J. R. Teachers' salaries in New York City. *New York, N. Y., Teachers college, Columbia university, 1927.* 258 p.

This outstanding salary study, made for the citizens' committee on salaries, had as its purposes to determine the facts, take salary adjustments out of politics, and recommend "fair and equitable schedules which could be accepted by citizens and teachers alike." Noteworthy for the bases used and for those discarded. For each schedule the basis group used was "the indispensable professional group whose living cost was highest." Complete description of organization, work, and public relations.

— Teachers' salaries. *School and society.* 25: 639, 375-76. March 26, 1927.

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Ohio. HUPP, J. L., and HECK, A. O. Public-school salaries in fourteen Ohio cities. *Educational research bulletin* (Ohio State university), 5: 197-204, May 1926.

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— The continuous salary survey—An aid to economic adjustment. *Nation's schools,* 7: 53-59, May 1931.

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Pittsburgh, Pa. Recommended salary schedule and plans for its administration. *Pittsburgh, Pa., Citizens' committee on teachers' salaries, in Pittsburgh, 1928.* 43 p.

Details on salary schedule and plans for administration with extremely brief statement of basic principles used. Unique feature of a personnel department to furnish the superintendent with full and accurate information as a basis for salary schedule policies.

— Survey of the salaries of teachers in the public schools of Pittsburgh in relation to the cost of living, by McKay, M. K. and Warne, C. E. *Pittsburgh, Pa., Pittsburgh teachers association, 1927.* 98 p.

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Yonkers, N. Y. **ELSBREE, WILLARD S.** Teachers' salaries in Yonkers, 1929. *New York, N. Y., Teachers college, Columbia university*, 1930.

CITY TEACHERS, STATISTICS

See also Salary Schedules

NATIONAL EDUCATION ASSOCIATION. Salaries paid in cities. *Washington, D. C., National education association*. (Research bulletins.)

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See also Economies, General; Instruction Costs; Teaching Load; Salaries, Public Relations

ANDERSON, C. R. Should teachers' salaries be reduced to meet the present economic depression? *American school board journal*, 81:41-42, December 1930.

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The economies involved in the rise and fall of teachers salaries, school board policies, and readjustments of class loads as regulators of school expenditures.

ELEMENTARY PRINCIPALS

MCGAUGHY, J. R. The salary of elementary school principals. Abstract. *Bulletin of the department of ele-*

mentary school principals, *National education association, Washington, D. C.*, 9:756, July 1930.

NATIONAL EDUCATION ASSOCIATION. Department of elementary school principals. The seventh yearbook. The elementary school principalship. The economic position of the elementary school principal. *Washington, D. C., Department of elementary school principals of the National education association*, 1928, p. 468-95.

Tabulates annual salaries paid 614 city supervising principals and to a number of elementary school principals in cities of various sizes in 1926-27, median and average salaries paid supervising elementary school principals throughout the United States, and the distribution of elementary school principals' salaries in United States. Shows the maximum salaries provided in 1927 schedules for supervising elementary school principals.

Pittsburgh. REITELL, CHARLES. Elementary principals' salaries in the proposed Pittsburgh schedule. *Washington, D. C., National education association*, 1929, p. 106-9. (Bulletin of the Department of elementary school principals of the National education association, January 1929.)

Describes the four principles of the Pittsburgh salary schedule for elementary school principals: Provision of rewards for service, adaptability to the local cost of living, provision of superior personnel for principalships, and the tax-paying ability of the community.

ROE, WARREN A. Report of the committee on salaries. In *National education association. Department of elementary school principals. Sixth yearbook*, Washington, D. C., National education association, 1926, p. 55-57. (Bulletin, vol. 6, no. 1, October 1926.)

Explains that if the public is concerned with keeping capable and trained educational leaders in the field it will have to provide salaries for those leaders which are commensurate with salaries of other vocations requiring equal training and ability. Present salaries of superintendents are compared with reasonable salaries.

Report of the salary committee. *Bulletin of the department of elementary school principals*, 9:777-79 July 1930.

WEBSTER, W. F. A single salary schedule for principals. In *National education association. Yearbook of proceedings*, 1926, p. 488-93.

Discusses the single salary schedule for all school principals. Defends the importance of elementary education and the complex skills required to administer an effective elementary educational pro-

gram as a basis upon which a salary schedule should be built. Maintains that a single salary schedule for principals is just as reasonable as one for teachers.

ELEMENTARY TEACHERS

Ohio. ANDERSON, EARL W., and FOSTER, RICHARD R. The salaries of elementary classroom teachers newly appointed in 1929-30. In *Teacher supply and demand in Ohio, 1929-30*, p. 77-85. (Ohio State university, Columbus, Ohio, Bureau of educational research monograph no. 11.)

Median salaries for the State for various groups classified by experience, sex, county, and city for 1928-29 and 1929-30.

SARGEANT, IDE G. Report of committee on salaries. *Washington, D. C., National education association*, 1925. p. 35-41. (Bulletin of the Department of elementary school principals of the National education association, vol. 5, no. 1, October 1925.)

Examines costs of living and the relative economic position of teachers in an attempt to determine scientifically a reasonable salary schedule for teachers. Gives particular attention to the matter of securing and retaining the quality of individual necessary for the efficient and effective administration of modern elementary schools.

GENERAL

See also Salary Schedules, Salaries, City Studies

BAER, JOSEPH A. For what is the teacher paid? *Educational research bulletin* (Ohio State university), 7: 221-50, May 30, 1928.

BURK, JOSEPH E. How can we induce a satisfactory per cent of the best potential teachers to undertake preparation for this service? *National education association proceedings*, 1930: 829-35.

CARRUTHERS, GEORGE E. The physical efficiency of teachers. *New York, N. Y., Teachers college, Columbia university*, 1924. p. 61-76. (Teachers college, Columbia university, Contributions to education, no. 155.)

CHANCELLOR, WILLIAM E. Teaching wages from the standpoint of economics. *American school board journal*, 71: 37-39, November 1925, 38-41, December 1925.

Discusses teachers' salaries in relation to national wealth and income. Contends that wages of teachers are not controlled by law of supply and demand

nor value of economic returns, but by ability of community to pay, tradition, purchasing power of the dollar and professional opinion. Lists indications of adequate salaries in school systems.

CLARK, H. F. Economic theory and correct occupational distribution. *New York, N. Y., Teachers college, Columbia university, Bureau of publications*, 1931. 176 p.

Develops and applies, particularly in Chapters IV and V, the theory that "occupational distribution is correct when people of the same level of ability receive the same wages in all occupations."

— and others. Index of teachers' salaries. *School and society*, 29: 603-4, May 11, 1929. Also *Journal of the National education association*, 18: 170, May 1929.

DIX, LESTER. The economic basis for the teachers' wage. *New York, N. Y., Teachers college, Columbia university*, 1931. 114 p. (Lincoln school research studies.)

Shows the extent to which teachers' salaries approach the level required under the Pigou theory that teachers should receive the same compensation as their equally scarce native abilities receive in other occupations. Finds teachers' salaries for 1925 were a third short on this basis and discusses implications of this finding.

ELSBREE, WILLARD S. Teachers' salaries and the financial depression. *American school board journal*, 83: 28, 80, November 1931.

Presents reasons why teachers' salaries should not be reduced because of the current economic depression.

FOSTER, RICHARD R. The teacher and his salary. *Journal of the National education association*, 20: 289-90, November 1931.

Discusses the problem of adequate salaries for teachers, and points out the economic factors which influence salary fluctuation.

HAMILTON, WALTON, and MAY, STACY. The control of wages. *New York, N. Y., George K. Doran co.*, 1923.

JACKSON, JULIA. Another phase of the salary question. *Journal of the National education association*, 14: 27, January 1925.

MOEHLMAN, ARTHUR B. Teacher salaries. In *his Public-school finance*. *New York, N. Y., Rand McNally*, 1927. p. 118-54.

Analyzes and evaluates various types of salary schedules and discusses the principles of salary schedule construction and the law of salaries in relation to the wages of labor and general economic considerations such as the cost of living and supply and demand. Includes salary schedules for school engineers, janitors, and clerks.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Check list for State salary laws. *Washington, D. C., National education association, 1930.* 68 p. (Research bulletin, vol. 8, no. 1, January 1930.)

— Facts about teachers' salaries. *Washington, D. C., National education association, 1924.* p. 20-26. (Research bulletin, vol. 2, nos. 1 and 2, 1924.)

— Fundamental considerations regarding teachers' salaries. *Washington, D. C., National education association, 1925.* p. 7-11. (Research bulletin, vol. 3, nos. 1-2, January-March 1925.)

— Contends that salaries determine the quality of people attracted to and remaining in the teaching profession, that salaries determine the quality of preparation of teachers, and, more than any other factor, the boards' chances of obtaining the services of capable teachers, and that indirectly teachers' salaries determine the child's outlook on life. Defends these contentions as a basis for salary schedules.

— Progress in lifting teacher compensation to a professional level. *Washington, D. C., National education association, 1927.* 208-11. (Research bulletin, vol. 5, no. 4, 1927.)

— Investigates teachers' salaries in the several States. Calls attention to recent increases in salaries of various groups, but concludes that such salaries are still comparatively low, and that further increases are necessary to put them at a point on the economic scale which will attract capable and well trained individuals.

— Purchasing power of teachers' salaries. *Washington, D. C., National education association, 1925.* p. 17. (Research bulletin, vol. 3, nos. 1 and 2, January and March 1925.)

— State salary laws. *Washington, D. C., National education association, 1930.* 124 p. (Research bulletin, vol. 8, no. 3, May 1930.)

— Teachers' salaries and salary trends, 1922-23. *Washington, D. C., National education association, 1923.* 115 p. (Research bulletin, vol. 1, no. 3, 1923.)

— The Nation's ability to lift teacher compensation to a professional level. *Washington, D. C., National education association, 1927.* p. 135-38. (Research bulletin, vol. 5, no. 8, 1927.)

— Investigates wealth, income, and school costs in the United States from 1890 to 1926 and total current income and aver-

age income per person gainfully employed from 1909 to 1926. Concludes that the United States has ability to give more adequate support to public schools.

New York State. HARRY, D. P. Cost of living of teachers in New York State. *New York, N. Y., Teachers college, Columbia university, 1928.* 184 p. (Teachers college, Columbia university. Contributions to education, no. 320.)

— Devises a method for measuring the cost of living in various localities and an index of the cost of living and recommends that cost of living be considered in the construction of equalization programs. Shows that in New York State the index can safely be based upon food and rent only.

North Dakota. PICKLES, C. E. Salaries and professional growth of teachers in North Dakota. *The North Dakota teacher.* April, 1925. 4: 4-7.

NORTON, JOHN K. The teachers standard of living. *Journal of the National education association, 15:* 45-46, February 1926.

— Compares salaries paid to those in educational work in 1924-25 with increases in costs of living, wage rates, and public school salaries from 1913 to 1925. Urges the entire profession to unite in securing increases in teachers' salaries.

Ohio. COTTERMAN, HOMER R. A study of the relation between training, experience, and salaries of the rural high-school teachers of Ohio. *M. A. thesis, 1926. Ohio State University.*

OHIO STATE UNIVERSITY. Wage and salary payments by government and public schools in Ohio. *In Industrial and commercial Ohio Yearbook, 1930. Columbus, Ohio, Ohio state university, 1930.* p. 135-38.

— The raw totals for each city and for all cities in each county for government and schools separately, for 1928. School attendance data in a previous chapter could be used for computing per pupil salary payments.

Ohio. The minimum salary law. *The Ohio teacher, May 1926.* 46: 397.

Relative value of teachers' salaries. *South Carolina education, January 1925.*

Some new proposals on the teacher salary question. *American school board journal, September 1926,* 73: 68, 69.

— Advocates adjusting teachers' salaries in proportion to value of professional work done.

WILEY, WILL E. Teachers' salary versus teacher surplus. *American school board journal*, 73: 47-48, October 1926.

Considers raising professional requirements the simplest method of regulating teacher supply.

HIGH-SCHOOL PRINCIPALS

EIKENBERRY, DAN H. Status of the high-school principal. *Washington, U. S. Government printing office*, 1925. (U. S. Office of education. Bulletin, 1925, no. 24.)

Maine. CLEM, ORLIE M. and McLAUGHLIN, SAMUEL J. A study of the professionalization of the high-school principalship in Maine. *Educational Administration and supervision*, 13: 1-12, 1927.

Texas. WIGGINS, D. M. Some phases of the status of high-school principals in Texas. *School review*, 39: 383-87, May 1931.

A study of the college training, salaries, and professional training, of principals of 608 high schools of different sizes. Opportunities of women in high-school principalships were also considered.

Wisconsin. HARRIMAN, CELIA. Salaries of high-school principals and city superintendents of schools in Wisconsin cities. In Report of municipal information bureau, Madison, Wis., *University of Wisconsin*, 1930. (Document no. 8.)

Wisconsin. LEWIS, L. L. Salaries of high-school principals and city superintendents of schools in Wisconsin cities. *University of Wisconsin, Madison, Wis.*, 1928. (Municipal information bureau series, no. 63.)

HIGH-SCHOOL TEACHERS

California. KEELING, H. A. Some typical California high-school salaries. *Sierra educational news*, 22: 411, June 1926.

DAVIS, C. O. Training, experience and salaries of high-school teachers. In North central association of colleges and secondary schools. Proceedings of 27th annual meeting, March, 1922.

Kentucky. BOWEN, J. W. The salaries and qualifications of Kentucky teachers in the high schools of the independent graded school districts. *Lexington, Ky., University of Kentucky*, 1927 (Typewritten).

Ohio. CLAY, WALLACE L. The economic activities of Ohio men high-school teachers. M. A. thesis. 1931. *Ohio State university, Columbus, Ohio*.

U. S. OFFICE OF EDUCATION. Annual salaries of teachers and administrators in the vocational high schools. In Industrial education in Buffalo public schools. *Washington, U. S. Government printing office*, 1931. p. 23, 27. (U. S. Office of education. Pamphlet no. 17, 1931.)

HIGHER EDUCATION

See also Salaries, Junior and Senior Colleges

[The most recent data usually are those in the mimeographed bulletins of the United States Office of Education's Division of Higher Education Statistics on Colleges and Universities and are issued about December of the odd-numbered years, teacher-training data in the even-numbered years]

AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS. Preliminary report of committee B on methods of appointment and promotion. In American association of university professors. Proceedings, 1928. p. 95-102.

ARNETT, TREVOR. Teachers' salaries in certain endowed and State-supported colleges and universities in the United States, with special reference to colleges of arts, literature, and science, 1926-27. *New York, N. Y., General education board*, 1928. 83 p. (Occasional papers, no. 8.)

Presents status of salaries of teachers in institutions of higher learning and extent of increase since 1920, based on data from questionnaires to financial officers and to teachers. Cites data on total and average salaries paid, number employed at each unit salary, salary scales, and tuition fees. The teachers' answers give data on salary, marital state, character and extent of supplementary salary, and whether from choice or necessity.

BELL, SPURGEON. Prof. Spurgeon Bell, of the Bureau of business research, *Ohio State university, Columbus, Ohio*, has extensive data on university salaries ready for publication. They cover professional salaries and cost of living for some 25 or 30 large and some smaller State universities comparable with Ohio State university.

BOHN, FRANK. \$50,000 for professors. *Forum*, 74: 491-501, October 1925.

A plea for higher salaries for university professors.

CARNEGIE FUND FOR THE ADVANCEMENT OF TEACHING. The notable rise in college salaries. In Carnegie fund

for the advancement of teaching. Twenty-first annual report. *New York, N. Y., Carnegie fund for the advancement of teaching, 1926.* p. 17-33.

Makes theoretical analysis of the economic and social basis of wages and salaries and tabulates statistical evidence which reveals that the purchasing power of educational salaries increased between 1914 and 1926.

DAVIE, MAURICE R. Must university professors be bachelors? *Eugenics, 3: 417-53, December 1930.*

FREED, WILLIAM J. A study of the salaries and teaching loads in the denominational 4-year colleges and private junior colleges in the United States. *Pacific Lutheran college, Parkland, Wash., 1929.* 30 p.

Average teaching loads and typical salaries for various position levels for many individual institutions and for groups of colleges, using 1927-28 data. Excellent summaries and comparative figures.

GREENLEAF, W. J. Salary statistics. In his Land-grant colleges and universities, year ended June 30, 1927. *Washington, U. S. Government printing office, 1928.* p. 42-57, 70-76. (U. S. Office of education. Bulletin, 1928, no. 14.)

Harvard university's increase of salaries. *School and society, 32: 565, October 25, 1930.*

HENDERSON, YANDELL, and DAVIE, MAURICE R., eds. Incomes and living costs of a university faculty. A report made by a committee on the academic standard of living appointed by the Yale-university chapter of the American association of university professors. With a foreword by James Rowland Angell. *New Haven, Yale university press, 1928.* x, 170 p. tables, diagrams.

HUTCHINS, ROBERT M. The spirit of the university of Chicago. *Journal of higher education, 1: 5-16, January 1930.*

Discusses the economic implications and values of keeping able men on university faculties. Claims that such men must be as well paid as men of equal ability in other fields and contends that the social economic dividend will likely be larger.

MCNEELY, JOHN H. Salaries in land-grant universities and colleges. *Washington, U. S. Government printing office, 1932.* 27 p. (Pamphlet no. 24, November, 1931.)

Analyses salaries of 6,890 college teachers in the land-grant institutions from questionnaire returns obtained for the year 1927-28.

NOYES, WILLIAM A. Professors' salaries; excerpts. *Bulletin of the American association of university professors, 16: 545-48, November 1930.*

STOWE, A. MONROE. A bibliography on recent literature on collegiate education. *Lynchburg, Va., 1930.* 44 p. (Bulletin of Lynchburg college, vol. 4, no. 3, June 1930. Studies in collegiate education.)

Contains 22 unannotated references on college teachers, salaries and living expenses of, to be located under that head in the index.

University teachers' salaries in Great Britain. *School and society, 31: 50, January 11, 1930.*

Discusses briefly the condition of university teachers' salaries in Great Britain and estimates the chances for immediate improvement.

JANITORS

See also Salaries, Other School Employees

BRUCE, WILLIAM G. A janitor's salary schedule. *American school board journal, 71: 59, December 1925.*

Outlines a plan for payment of janitors in large city systems.

GANDERS, H. S. Compensation for janitorial-engineering service. *American school board journal, 82: 63, 108, 110, February 1931.*

The writer reviews briefly the results of two investigations on salaries paid to janitors. His article is chiefly concerned with discovering trends and practices with reference to service load, pensions, problems of absence and substitutions, variations in cost of janitorial service, period of service or employment, and salary schedule.

WOMBATH, G. F. A salary schedule vs. the salary budget for public-school janitorial engineering service. *American school board journal, 78: 45-47, 148, May 1929.*

Presents a scientific basis for determining the salaries of school janitors. Outlines work schedules and salary schedules used in Minneapolis. Presents nine factors which affect the amount of money legitimately spent for janitorial service in a school system.

JUNIOR AND SENIOR COLLEGES

See also Salaries, Higher Education

BALDWIN, T. W. Review of W. J. Freed's study of the salaries and teaching loads in denomination four-year colleges and private junior colleges in the United States. *American association of university professors, 1929.* p. 520-23.

(American association of university professors. Bulletin, no. 25, November 1929.)

MORRIS, CHARLES S. and PROCTOR, W. M. The junior college faculty. *Stanford university, Calif., Stanford university press*, 1927. p. 41-59.

Discusses training, salary, and teaching load of junior college instructors, and emphasizes the importance of a well-qualified teaching staff.

WAHLQUIST, JOHN. Status of the instructors in public and in private junior colleges. *School and society*, 33: 95-97, January 17, 1931.

— Status of the junior college instructor. *Junior college journal*, 1: 125-34, December, 1930.

WHITSITT, E. L. Salaries and tenure in junior colleges. In American association of junior colleges. Ninth annual report, 1928. *Fort Worth, Tex., American association of junior colleges*, 1928. p. 89-92.

A study based on 111 questionnaires answered by member colleges of the American association of junior colleges, showing median salaries, and tenure of faculty members and the status of retirement provisions for junior college faculties.

KINDERGARTEN TEACHERS

DAVIS, MARY D. In Nursery kindergarten-primary education. *Washington, U. S. Government printing office*, 1927. p. 26-30, 44. (U. S. Office of education. Bulletin, 1927, no. 28.)

— Kindergarten teachers' salaries. In a primer of information about kindergarten education. *Washington, U. S. Government printing office*, 1928. p. 4. (U. S. Office of education. City school leaflet, no. 30, August 1928.)

MUSIC SUPERVISORS

DYKEMA, PETER W. Salaries of music instructors. In Music for public-school administrators. p. 107-8. *Teachers college, Columbia university*, 1931.

Approximate salaries for supervisors and special teachers for four size-groups of cities.

NEGRO

BLOSE, DAVID T. Average salaries of men and women Negro teachers for States reporting teaching expenses of Negroes for 1925-26 and 1927-28. In *Statistics of the Negro race*,

1927-28. *Washington, U. S. Government printing office*, 1930. Table 11. p. 16. (U. S. Office of education. Pamphlet, no. 14, December 1930.)

Port Arthur, Tex. Colored teachers' salaries. In Report of survey of schools of Port Arthur, Tex. *New York, N. Y., Teachers college, Columbia university*, 1926. p. 331-33.

STATE DEPARTMENT OF EDUCATION (North Carolina). Number and salaries of colored principals, 1929-30. *Raleigh, N. C., State department of education*, 1931.

— Number and salaries of colored teachers by counties, 1929-30. *Raleigh, N. C., State department of education*, 1931.

Shows number and salaries of colored teachers in North Carolina in terms of the State salary schedule, including experience rating. Not available for distribution.

NURSES

U. S. OFFICE OF EDUCATION. School nurse administration. *Washington, U. S. Government printing office*, 1925. 10 p. (School health studies, no. 11.)

The duties, supervision, and salaries of school nurses in representative cities of all States in 1924-25.

OTHER SCHOOL EMPLOYEES

See also Salaries, Janitors

HUGHES, W. H. Comparative study of salaries paid teachers and other school employees. *Washington, D. C., National education association*, 1925. p. 5-22. (Research bulletin, vol. 4, no. 1, September 1925.)

MOEHLMAN, ARTHUR B. Salaries of employees other than teachers. *Public-school finance*, 10: 155-71. *Rand McNally*, 1927.

Good general treatment of the bases which should determine salary schedules for these employees. Practical suggestions for working out and adjusting such schedules.

PHYSICAL EDUCATION DIRECTORS

SCOTT, HARRY A. Personnel study of directors of physical education for men in colleges and universities. *New York, N. Y., Teachers college, Columbia university*, 1929. 90 p. (Teachers college, Columbia university. Contributions to education, no. 339.)

From the results of a questionnaire answered by 178 directors of physical education in State, private, and denomi-

national colleges, this study analyzes the probable maximum and minimum salaries of directors of physical education and judged by data submitted, shows their usual rate of promotion.

PUBLIC RELATIONS

ALMACK, J. C. and LANG, A. B. Problems of the teaching profession. Cambridge, Mass., Houghton Mifflin co., 1925. p. 335-53.

A philosophical treatment of teachers' salaries in relation to the cost of living. Includes such topics as: Basis for computing salaries, salary requirements, salary schedules, merit factors, controversial elements, and salary campaigns.

Chicago. ROGERS, D. C. Chicago's unique salary campaign. *American school board journal*, 71: 90, December 1925.

Describes campaign for adoption of salary schedule including pertinent data in a readable form.

How much is a teacher worth? *Sierra educational news*, 21: 657, December 1925.

MOEHLMAN, A. B. Public-school relations. *New York, N. Y., Rand McNally*, 1927. p. 57-65.

Compares the values of periodic and continuous publicity for the purpose of maintaining or raising teachers' salaries.

New York. A campaign for a single salary schedule for greater New York elementary teachers. *School and society*, 22: 237, August 22, 1925.

Describes in detail a circular distributed to school patrons of New York City in 1925 as an agent to gain public support for a better salary schedule for elementary school teachers. Outlines the daily work of the elementary school teacher, estimates her influence upon the personality of the child, and compares her training and salary with that of clerks and stenographers.

Vote of confidence. *Journal of the National education association*, 16: 53-54, February 1927. (Also found in National education association. Research bulletin, vol. 5, no. 3, May 1927. p. 182.)

Describes the organized efforts by which a teachers' committee and the superintendent of schools of Cincinnati, Ohio, used data compiled by the National Education Association to induce the citizens of that city to vote the largest special tax ever voted there for the purpose of increasing teachers' salaries.

RESEARCH DIRECTORS

MARTENS, ELISE H. Functions and working sources of research bureaus. In Organization of research bureaus in city school systems. *Washington, U. S. Government printing office*,

1924. p. 5-15. (U. S. Office of education, City school leaflet, no. 14, January 1924.)

RURAL, GENERAL

ABEL, J. F. Statistics of finance. In A study of 260 school consolidations. *Washington, U. S. Government printing office*, 1924. Table 6, Section I-D. p. 32. (U. S. Office of education, Bulletin no. 32, 1924.)

COVERT, TIMON. Rural school consolidation. *Washington, U. S. Government printing office*, 1930. p. 28-34. (U. S. Office of education, Pamphlet no. 6.)

GAUMNITZ, W. H. Salaries and salary trends of teachers in rural schools. *Washington, U. S. Government printing office*, 1930. (U. S. Office of education Bulletin, 1929, no. 6.)

U. S. OFFICE OF EDUCATION. Salary and salary trends of teachers of rural schools. *Washington, U. S. Government printing office*, 1929. p. 38, 46, 49, 50, 51, 52, 53. (U. S. Office of education, Bulletin no. 6, 1929.)

RURAL SUPERINTENDENTS

COOK, KATHERINE M. Salaries and legal provisions of county school superintendents in United States. *Washington, U. S. Government printing office*, 1929. p. 5, 6, 7. (U. S. Office of education rural school leaflet, no. 45.)

COTTERMAN, H. R. Salaries of the rural high-school superintendents in Ohio. *Columbus, Ohio. Ohio State university*, 1926. p. 185-39. (Educational research bulletin, vol. 5, no. 7, 1926.)

WASSON, A. W. Who should support the office of county superintendent? *Texas outlook*, 14: 55-56, October 1930.

RURAL SUPERVISORS

UNITED STATES OFFICE OF EDUCATION. Supervision and rural school improvement. *Washington, U. S. Government printing office*, 1930. p. 10-17. (U. S. Office of education. Bulletin no. 31, 1930.)

RURAL TEACHERS

U. S. OFFICE OF EDUCATION. Supervision and rural school improvement. *Washington, U. S. Government print-*

ing office, 1930. p. 10-17. (U. S. Office of education. Bulletin no. 31, 1930.)

MICHIGAN STATE TEACHERS ASSOCIATION. Status of teaching in the rural schools. *Lansing, Mich., Michigan State teachers association*, 1925. p. 6-33. (Bulletin, no. 5, Part I, 1925.)

North Carolina. CARR, JOHN W. Factors affecting distribution of trained teachers among rural white elementary schools of North Carolina. In *Salary provisions. Chapters 2, 3, 5. New York, N. Y. Teachers college. Columbia university*, 1927. 91 p. (Teachers college, Columbia university. Contributions to education, no. 269.)

SUMMERS, ALEX. Salaries of country teachers in 1923. *Washington, U. S. Government printing office*, 1923. p. 2, 6, 11, 13, 24, 25, 26, 27, 28, 29. (U. S. Office of education rural school leaflet no. 24.)

Salaries of rural teachers and length of term, 1924. *Washington, U. S. Government printing office*, 1926. p. 20, 34. (U. S. Office of education rural school leaflet, no. 39, 1926.)

The comparison of salaries among urban and rural teachers. *School and society*, 34:253-54, August 22, 1931.

An advance summary of a few of the important facts revealed by a forthcoming study in salary trends. Total salary figures and percentages are given to show contrasts between salaries of urban and rural teachers from 1921 to 1931.

U. S. OFFICE OF EDUCATION. One-room schools and consolidated schools, 1924. *Washington, U. S. Government printing office*, 1924. p. 2, 3-4. (U. S. Office of education. Rural school circular, no. 10, 1924.)

Salaries and salary trends of teachers of rural schools. *Washington, U. S. Government printing office*, 1929. 54 p. (U. S. Office of education, Bulletin 1929, no. 6.)

STATE DEPARTMENTS

FALLS, J. D. A job analysis of the State high-school supervisor in the United States. Thesis, 1926. *George Peabody college for teachers, Nashville, Tenn.*, 1926. (Contribution to education, no. 25.)

Examines legal bases for the creation of office of State high-school supervisor, qualifications of the incumbents of the office, legal methods of selecting the in-

cumbents, and legal fixation of salaries, and investigates the scope of the activities of the incumbents of the office.

FERGUSON, ARTHUR W. Professional staff of State departments of education. *Washington, U. S. Government printing office*, 1925. p. 39-40. (U. S. Office of education. Bulletin, 1925, no. 17.)

Salary distributions and salaries of certain staff members in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania in 1923.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Salaries of State superintendents. Studies in State education administration. *Washington, D. C., National education association*, 1931. p. 8-49. (Research bulletin, vol. 9, 1931.)

REEDER, WARD G. The salary of the chief State school officer. *American school board journal*, 67:41-42, August 1923.

STATE REGULATIONS

ALMACK, J. C. and LANG, A. R. Problems of the teaching profession. *New York, N. Y. Houghton, Mifflin co.*, 1925. p. 235-54.

GRIMM, L. R. The regulation of salaries of teachers by State authority. *Springfield, Ill., Illinois State teachers association*, 1929. 13 p.

LEWIS, E. E. Personal problems of the teaching staff. *New York, N. Y. Century co.*, 1925. p. 275-303.

NATIONAL EDUCATION ASSOCIATION. A self survey plan for State school systems. Part I. Checklists. Part II Handbook. *Washington, D. C., National education association*, 1930. p. 68, 124-26. (Research bulletin, vol. 8, March and May 1930.)

NATIONAL EDUCATION ASSOCIATION. Check list for State salary laws. *Washington, D. C., National education association*, 1930. p. 68, 172. (Research bulletin, vol. 8, no. 1, January 1930.)

STATE STUDIES

Connecticut. THOMPSON, ROGER M. Teachers' salaries, 1929-30. *Division of research and surveys of the State board of education, Hartford, Conn.*, 1930. 21 p.

DENNY, E. C. A study of school salaries in four States. *American school board journal*, 68: 53-54, May 1924.

Missouri, Kansas, Iowa, and Nebraska are the States studied in this article.

- Florida. SPENCER, PAUL R. State minimum teachers' salary schedule; a part of Florida's minimum educational program. Doctor's dissertation. (In press at Teachers College, Columbia University, New York.)
- Illinois. Teachers' salaries and the cost of living. *The Illinois teacher*, 14: 163-64, May 1926.
- Iowa. GREENE, H. A. and DORAN, D. T. Factors affecting public-school teachers' salaries in Iowa. *Iowa City, Iowa, University of Iowa*. (University of Iowa extension bulletin, no. 5.)
- ROGERS, DON C. Trend of teachers' salaries. *Iowa City, Iowa, University of Iowa*, 1923. 29 p. (University of Iowa extension bulletin, no. 88, April 1, 1923.)
- Kansas. O'BRIEN, F. P. Salaries of teachers in Kansas. *University of Kansas. Laurence, Kans.*, 1927.
- PHILLIPS, C. U. Salaries, experiences, and training of teachers in the second-class cities of Kansas. Master's thesis, 1927. *University of Chicago, Chicago, Ill.*, 1926-27.
- Louisiana. Report of committee on teachers' salaries. *Journal of Louisiana teachers association*, 3: 20-22, January 1926.
- Maine. Bulletin of information, 1926. *State department of education, Augusta, Me.* p. 24-27, February 1926.
- Massachusetts. Salaries of teachers in public day schools of Massachusetts, 1926. *Boston, Department of education*, 1926, 45 p. (Bulletin, 1926, no. 5, whole no., 170.)
- Tabulates salaries of all types of principals and teachers in Massachusetts towns and cities.
- Salaries of teachers in public day schools of Massachusetts, 1931. *Boston. State department of education*. Bulletin, 1931, no. 9, whole no., 229.
- Tabulates salaries of all types of principals and teachers in Massachusetts towns and cities.
- Michigan. DIAMOND, THOMAS. A study of the teachers of industrial arts and industrial education in the State of Michigan. *Ann Arbor, Mich., School of education, University of Michigan*, 1927. 52 p. (Vocational education department. Special studies no. 3, June 1927.)
- WOODY, CLIFFORD and others. Report of committee on teachers' salaries. *Michigan state teachers association*. Lansing, Mich. 1923. 67 p.
- Minnesota. STATE DEPARTMENT OF EDUCATION. Teachers' salaries 1931-32. St. Paul. *State department of education*, 1932. 18 p. (Mimeographed report.)
- Analyzes teachers' salaries in considerable detail. Considers such factors as training, experience, type of school, and class size.
- Missouri. CAPPS, A. G. and others. Report of committee on teachers' salaries and tenure of office. *School and community*. (Columbia, Mo.), 11: 37-38, January 1925.
- New Mexico. FICKINGER, PAUL L. and SANCHEZ, GEORGE I. Analysis of teachers' salaries in New Mexico with a comparison of salaries paid other public servants. *New Mexico school review*, 10: 18-25, March 1932.
- Takes into account training and experience of teachers. Shows that the common laborer gets \$82.52 per month as compared to \$81.14 as the average for all elementary teachers and \$73.68 for rural teachers.
- New York. HARRY, DAVID P. Cost of living of teachers in the State of New York. *New York, N. Y., Teachers college, Columbia university*, 1928. (Teachers college, Columbia university. Contributions to education, no. 320.)
- North Carolina. STATE DEPARTMENT OF EDUCATION. Comparison of salary cost (State schedule) 1929-30—present term (not exceeding eight months) with uniform eight months term. *Raleigh, N. C., State department of education*, 1931.
- Number and salaries of white teachers by counties, 1929-30. *Raleigh, N. C., State department of education*, 1931.
- Oregon. HUFFAKER, C. L. Statistical studies of teachers' salaries are to be found in "Teacher supply and demand in Oregon." *Eugene, Oreg., University of Oregon, education series*, vol. 2, no. 5, p. 99-156. 1931.
- Statistical studies on teachers' salaries. *Oregon state teachers association quarterly*, 8: 55-62, March 1926.
- Utah. PARRATT, J. EASTON. Utah teachers salaries for 1930-31. *Utah educational review*, 25: 262-63, February 1932. (See also the March number of this journal for a similar article by the same authority.)
- A statistical study including a frequency distribution of the salaries paid all Utah public-school teachers.

Washington. MARSH, ARTHUR L.
Teachers' salaries in Washington.
Washington educational journal, 4:
185-86, February 1925.

STATE SUPERINTENDENTS

See Salaries, State Departments

STATISTICS

The following research bulletins of the National Education Association at some time give salary statistics (for city schools throughout the series) for the classes of workers listed. Beginning in 1927, the data have been for city school systems only, classified by size groups.

Data for 1922-23 in vol. 1, no. 2, March 1923.

Data for 1924-25 in vol. 3, nos. 1 and 2, January and March 1925.

Data for 1926-27 in vol. 5, no. 2, March 1927.

Data for 1928-29 in vol. 7, no. 3, May 1929.

Data for 1930-31 in vol. 9, no. 3, May 1931.

Americanization Directors or Supervisors.

Americanization Directors or Supervisors, Assistant.

Art Directors or Supervisors.

Art Directors or Supervisors, Assistant.

Attendance Officers.

Atypical (Special Class) Teachers.
Buildings and Grounds Superintendents.

Buildings and Grounds Superintendents, Assistant.

Business Managers.

Business Managers, Assistant.

Clerks in Administrative and Supervisory Offices (See also Secretary).

Clerks of Board.

Clerks in Principals' Offices.

Continuation School Directors or Supervisors.

Continuation School Directors or Supervisors, Assistant.

Directors, Miscellaneous.

Directors, Miscellaneous, Assistant.

Elementary Principals, Supervising.

Elementary Principals, Teaching.

Elementary Principals, Assistant.

Elementary Supervisors.

Elementary Teachers.

Evening School Directors or Supervisors.

Evening School Directors or Supervisors, Assistant.

Health Directors or Supervisors.

Health Directors or Supervisors, Assistant.

High School Deans.

High School Department Heads.

High School Principals.

High School Principals, Assistant.

High School Supervisors.

High School Supervisors, Assistant.

High School Teachers.

Home Economics Directors or Supervisors.

Home Economics Directors or Supervisors, Assistant.

Intermediate Grade Supervisors.

Intermediate Grade Supervisors, Assistant.

Janitors, Head.

Janitors, Head, Assistant.

Janitors.

Junior High School Deans.

Junior High School Principals.

Junior High School Principals, Assistant.

Junior High School Supervisors.

Junior High School Supervisors, Assistant.

Junior High School Teachers.

Kindergarten Directors.

Kindergarten Directors, Assistant.

Kindergarten Supervisors.

Kindergarten Teachers.

Manual Training Directors or Supervisors.

Manual Training Directors or Supervisors, Assistant.

Music Directors or Supervisors.

Music Directors or Supervisors, Assistant.

Nurses, Head.

Nurses.

Other School Employees.

Part Time School Principals.

Part Time School Teachers.

Penmanship Directors or Supervisors.

Penmanship Directors or Supervisors, Assistant.

Physical Education Directors or Supervisors.

Physical Education Directors or Supervisors, Assistant.

Principals.

Primary Supervisors.

Primary Supervisors, Assistant.

Research Directors.

Research Directors, Assistant or Supervisors.

Rural Principals.

Rural Superintendents.

Rural Supervisors.

Rural Teachers.

Secretary of the Board.

Secretary of the Superintendent.

Secretary of the Superintendent, Assistant.

Special (Atypical) Class Teachers.

Substitute Teachers.
 Superintendents.
 Superintendents, Associate or Assistant.
 Supervisors, Miscellaneous.
 Supervisors, Miscellaneous, Assistant.
 Vocational Education Directors or Supervisors.
 Vocational Education Directors or Supervisors, Assistant.

NATIONAL EDUCATION ASSOCIATION. Average salaries of school employees by states, 1925. *Washington, D. C., National education association, 1927.* p. 209. (Research bulletin, vol. 5, no. 4, September 1927.)

Also per cent increase in average income salaries or wage of several groups (page 208).

Per cent of urban and rural school teachers receiving various salaries. *Washington, D. C., National education association, 1927.* p. 141. (Research bulletin, vol. 5, no. 3, May 1927.)

NOBLE, M. C. S. Teacher salaries in city school systems in the United States. A comparison with those in North Carolina Cities, 1930-31. *Raleigh, N. C., State department of education, 1931.*

PETERSON, E. T. and MACGREGOR, J. R. and LURA, C. Teachers' salaries. Review of educational research—teacher personnel. *Washington, D. C., American educational research association, April 1931.* p. 86-91, 145-47.

PHILLIPS, FRANK M. Statistics of State school systems, 1927-28. *Washington, U. S. Government printing office, 1930.* p. 15, 48, 50. (U. S. Office of education, Bulletin, no. 5, 1930.)

Similar data in corresponding bulletins for previous years.

Salaries paid in city-school systems in 1930-31. *Journal of the National education association, 20: 285, October 1931.*

A table, with brief legend, showing the median salaries of elementary and high-school teachers by States, and cities of more than 100,000 in population, 30,000 to 100,000, 10,000 to 30,000, 5,000 to 10,000, and 2,500 to 5,000 in population.

U. S. OFFICE OF EDUCATION. Statistics of State school systems, 1923-24. *Washington, U. S. Government printing office, 1926.* 43 p. (U. S. Office of education. Bulletin no. 42, 1925.)

SUBSTITUTE TEACHERS

U. S. OFFICE OF EDUCATION. Pay status of absent and substitute teachers for numerous large cities. *Washington, U. S. Government printing office, 1926.* 14 p. (U. S. Office of education. City school leaflet, 1926, no. 21.)

Investigates the practices found in 163 cities of various sizes in the United States in an attempt to discover the prevailing practices with respect to amount of sick leave granted teachers in the United States, and the payment of substitutes.

SUPERINTENDENTS

See also Salaries, Rural, Superintendents

KIDD, DONALD M. and CLEM, O. M. The salaries of superintendents of schools and mayors in cities of 100,000 population and over. *American school board journal, 73: 49-50, September 1926.*

A comparison of the salaries of the school superintendents and the mayors of 82 cities of 100,000 population and more. Reveals a range of \$4,000 to \$15,000 for school superintendents and \$1,500 to \$25,000 for mayors, a median of \$8,000 for superintendents and \$6,000 for mayors, and an average of \$8,549 for superintendents and \$7,147 for mayors.

North Carolina. STATE DEPARTMENT OF EDUCATION. Salaries of superintendents. *Raleigh, N. C., State department of education, 1931.*

SMITH, PAYSON. What progress has superintendence made? In National education association. Addresses and proceedings, 1925. *Washington, D. C., National education association, 1926.* p. 671-72.

Shows that from 1869 to 1914 the average salary of superintendents of schools in 18 representative cities increased from \$2,520 to \$6,736 and on up to \$8,760 by 1923.

West Virginia. BRADLEY, FREDERICK A. A study of the trend of school administrators' salaries in West Virginia. M. A. thesis, 1928. *Ohio State university, Columbus, Ohio.*

Wisconsin. HARRIMAN, CELIA. Salaries of high-school principals and city superintendents of schools in Wisconsin cities. In Report of municipal information bureau. *Madison, Wis. University of Wisconsin, 1930.*

LEWIS, L. L. Salaries of high-school principals and city superintendents of schools in Wisconsin cities. *University of Wisconsin, Madison, Wis., 1928.* (Municipal information bureau series, no. 63.)

SUPERVISORS

See also Salaries, Rural, Supervisors

AYER, F. C. and BARR, A. S. Salary adjustment. In *their* The organization of supervision. New York, N. Y., D. Appleton and co., 1928. p. 60-62.

A section of this book deals with plans now existent for fixing the salary of supervisors. Recommends a progressive salary schedule.

TEACHER TRAINING

[The U. S. Office of education issues mimeographed bulletins giving salary data, in December of the even-numbered years]

KELLY, E. L. Salaries in State teacher-training institutions. Greeley, Colo., Colorado State teachers college. Research bulletin no. 13. 1928.

Louisiana. SMITH, JAMES M. Salaries. In The training of high-school teachers in Louisiana. New York, N. Y.: Teachers college, Columbia university. 1927. p. 33-37. (Teachers college, Columbia university. Contributions to education, no. 247.)

SALARY SCHEDULES

GENERAL

See also Salaries, City Studies; Salaries, General

CLARK, R. C. Principles of advancing the salaries of teachers. *American school board journal*, 80: 41, March 1930; 80: 50, April 1930.

Discusses the factors which should determine the amount and rate of salary increments. These include: Faithful service, experience, difference in increments, arguments for variations in salaries, the problem of junior high school salaries, the single salary schedule, need for cultured teachers in all grades, the value of advanced degrees and in-service training, the value of travel, and the difficulty of recognizing merit, in relation to teacher salary increments.

— Principles underlying the minimum teachers salary. *American school board journal*, 80: 55, February 1930.

Presents seven principles underlying the determination of a minimum salary figure for teachers—a living wage, attraction of desirable personalities, common practice, preparation, capability, and the discrepancies between the salaries of men and women.

— The principles underlying the maximum salary. *American school board journal*, 80: 47, May 1930.

Discusses the living wage, limitations on maximum salary, examples of ability to pay, equal compensation for men and

women, and the preparation of a salary schedule, in relation to a maximum salary schedule and its influence in attracting capable and well-trained men and women to the teaching profession.

— When the teacher is sick. *American school board journal*, 80: 68, June 1930.

Lists 13 prevailing practices in regard to granting sick leave to teachers. Discusses the social and economic advantages of employing teachers on an annual professional salary. Suggests physical examinations, nursing service, reasonable teaching load, provision for recreation, healthful school buildings and sympathetic supervision as measures for the reduction of loss of time by teachers.

CORNELL, C. B. Salaries or wages? *American school board journal*. 74: 45, 161. March 1927.

CUBBERLEY, E. P. State school administration. Cambridge, Mass., Houghton Mifflin co., 1927. p. 65-58.

Discusses the low level of pay for teachers and the efforts of a few States to remedy the situation by adopting State salary schedules. Outlines the principles and problems of salary schedule construction and explains the various methods of basing salary increases on teaching efficiency.

CULP, V. H. Superintendent standard and the salary schedule. *American school board journal*. p. 34, November 1924.

ELSBREE, WILLARD S. Teachers' salaries. New York, N. Y., Teachers college, Columbia university, 1931. 286 p.

Discusses economics of teachers' salaries, equal pay, types of salary schedules, rating for salary schedules, formulation of salary schedules, estimating cost of salary schedules, ability of communities to support salary schedules and salary schedule campaigns.

GOSLING, THOMAS W. A salary schedule for teachers in a city of 40,000. *American school board journal*. p. 37. October 1924.

JENSEN, F. H. Development of a salary schedule. *American school board journal*, 78: 45-46, June 1929.

LEWIS, E. E. Desirable principles of teachers' salary schedules. *American school board journal*, 80: 45-40, May 1930.

Discusses the spoils system, teachers' salaries, building salary schedules, the cost-of-living index, and the growth of a single salary basis. Cites examples.

LEWIS, E. E. Factors determining salary schedules. *Journal of educational research*, 9: 199-212, March 1924.

Gives the basic principles of salary schedules.

LEWIS, E. E. Personnel problems of the teaching staff. *New York, N. Y., Century Co.* 14: 275-303, 1925.

Discusses the advantages of a salary schedule founded upon the principles of minima, equality of opportunity, advancement, training, experience, and sex.

MOEHLMAN, ARTHUR B. Some considerations in building salary schedules. *Journal of educational research*, 14: 256-69, November 1926

Discusses some of the essentials which enter into building a salary schedule. Explains the apparent relationship between the wages of labor and the salaries of teachers. Calls attention to differences in standards of living and type of service. Develops an index as a basis for salary schedules.

MORRISON, HENRY C. Determination of salary and load. In his *The management of the school money*. Chicago, Ill., *University of Chicago press*, 1932. p. 260-92.

A theoretical treatment with practical applications of the elements to be considered in adjusting salaries, retirement pay, and teaching load.

MUNZENMAYER, LESTER HENRY. Greater equalization of educational opportunity through a salary schedule. Ph. D. thesis, 1928. *Ohio State university, Columbus, Ohio.*

NATIONAL EDUCATION ASSOCIATION. Five reasons for adequate salary schedules. *Washington, D. C., National education association*, 1925. p. 7-11. (Research bulletin, vol. 3, no. 1-2, January-March 1925.)

Presents and defends five theses: (1) Teachers' salary schedules, more than any other factor determine the quality of people attracted to the teaching profession; (2) the quality of preparation of teachers; (3) the quality of human material that continues in the profession; (4) a school board's chances of obtaining the services of capable teachers; and (5) teachers' salaries indirectly determine a child's outlook upon life.

Principles and standards involved in the making and administration of teachers' salary schedules. *Washington, D. C., National education association*, 1923. p. 71-81. (Research bulletin, vol. 1, no. 3, 1923.)

Also suggestive schedules in operation in 1923 (pages 58-70) and city salary schedules in 1923 (pages 35-47).

Research division. The scheduling of teachers' salaries. *Washington, D. C., National education association*, 1927. p. 129-92. (Research bulletin, vol. 5, no. 3, May 1927.)

After an examination of the Nation's ability to lift teachers' salaries to a professional level, this bulletin compares the income and economic position of the teaching group with other gainfully em-

ployed groups. Discusses classification of school employees, the single salary schedule, bases for fixing the rates of salary schedules, and the scientific processes of scheduling salaries, as guides to salary scheduling.

Salary schedules and public-school efficiency. *Washington, D. C., National education association*, 1923. p. 83-84. (Research bulletin, vol. 1, no. 2, 1923.)

The scheduling of teachers' salaries. *Washington, D. C., National education association*, 1932. (Research bulletin, vol. 10, no. 1, January 1932.)

Unjust discrimination between teachers in the elementary schools and teachers in the high schools. *Journal of National education association*, February 1923.

NAYLOR, ELMER T. An analysis of teachers' salary schedules in cities of the United States. M. A. thesis, 1925. *Ohio State University, Columbus, Ohio.*

North Carolina. WARREN, JULE B. Attack on the salary schedule. *The North Carolina teacher*. 1: 293. June 1925.

NORTON, JOHN K. Major trends in teacher-salary scheduling. *Teachers college record*, 32: 719-23, May 1931.

Discusses planning, emphasis on training, increasing the period of increments, adjusting to teaching efficiency, and increase toward a professional level.

Providence. STRAYL, GEORGE D. The Providence salary schedule. *School executives magazine*, 50: 186, December 1930.

The author, reasoning that unusual work should receive higher compensation than ordinary work, has devised a salary schedule which will provide increase beyond the automatic maximum and several double increments for outstanding work of teachers. The article describes the schedule.

SPENCER, PAUL R. State minimum teachers' salary schedule; a part of Florida's minimum educational program. (Doctor's dissertation in Teachers college, Columbia university, in press at Teachers college.)

Tennessee. State salary schedules. *Nashville, Tenn., Tennessee educational bulletin*, 7: 3-4, April-May-June 1926.

WINSLOW, ISAAC O. The salary enigma. *American school board journal*. September 1926. 73: 40, 167.

Considers competent supervision and a supermaximum for superior service as better than regular salary scheduling.

MERIT SYSTEMS

REITZEL, CHARLES. Pittsburgh proposes a merit salary schedule for teachers. *Nation's schools*, 3: 46-48, February 1929.

The plan includes merit along with training as a basis for paying teachers. States that it is equitable toward the taxpayer and safeguards the children's welfare.

YOUNG, LLOYD P. The administration of merit-type teachers salary schedules. *New York, N. Y., Teachers college, Columbia university*, 1932. In press. (Teachers college, Columbia university. Contributions to education.)

Analysis and evaluation with 13 criteria of all cities reported by the National Education Association as using merit rating in salary schedules in 1928. Summarizes practices in detail as justifiable and unjustifiable, and lists the specific minimum procedures to be followed by any school administrator attempting to use a merit-type salary schedule. Stays clear of question as to whether such a schedule should be used. Bibliography of 40 unannotated references.

SINGLE SALARY

CONVERSE, FRANK E. Experience with a single salary schedule. In National education association. Addresses and proceedings, 1924. p. 942-43.

ELSBREE, WILLARD S. An evaluation of the single salary schedule. *Teachers college record*, 30: 227-32, December 1928.

An outline of the underlying principles covering ease of administration, impartiality, encouragement for teachers to stay in positions for which they are fitted, and an incentive for further training are some advantages accredited to the single salary schedule. Includes a plan for the grouping of teachers in all grades as service, journeyman, graduate, and master teachers.

Equal compensation for New Jersey high-school teachers. *School and society*, 30: 261, August 24, 1929.

Discusses the decision of the New Jersey State commissioner of education that Perth Amboy reconstruct its salary schedule for 1929-30 to incorporate the principle of equal compensation for men and women high-school teachers doing equal work, and having equal training and experience.

HOSIC, JAMES F. The single salary schedule in practice. *Teachers college record*. p. 228. December 1924.

Increments. *The school index*. 12: 33, October 2, 1925.

Résumé of report by E. S. Evenden to elementary principals' club of Cincinnati. Recommends fewer but larger increments, based on additional training. Argues for single salary schedule. (Annotation from N. E. A. Research division.)

JONES, R. G. The great adventure. In National education association Proceedings, 1930. p. 123-24.

KRUSEN, ALMA. How the single salary schedule appeals to the teacher. In Department of superintendents—official support, 1926. Washington, D. C., National education association, 1926. p. 222-26.

LEWIS, E. E. Arguments and principles favoring the single salary schedule. *American school board journal*, 72: 49-50, April 1926.

After defending "the basic single salary schedule," which in this paper means a schedule of salaries covering all classroom teachers in kindergarten and grades 1 to 12, inclusive, regardless of sex, position, grade, or subject taught, this article discusses minimum requirements, equality of opportunity to reach high economic level, advancement, training, experience, merit, and sex as the factors composing the principles that support the single salary schedule.

The single salary schedule. In National education association, Department of superintendence. Official report, 1926. Washington, D. C., National education association, 1926. p. 213-17.

Discusses the development of a complete basic single salary schedule for all classroom teachers, kindergarten to grade 12 included, regardless of sex, position, grade, or subject taught, based on a minimum age, certificate, amount and kind of training required for all beginners. Gives nine arguments upholding the plan.

MONROE, O. D. Single salary schedules. *Texas outlook*, 14: 51, July 1930.

MORRIS, LYLE L. The single salary schedule: an analysis of evolution. *New York, N. Y., Teachers college, Columbia university*, 1930. 79 p. (Teachers college, Columbia university. Contributions to education, no. 413.)

An analysis, using data from 68 cities, of the status of the single salary schedule in the United States in relation to its effect on the training and experience of teachers, annual increases, current expenses, number of pupils per teacher, percentage of men and women teachers, and training teachers in service. Includes methods for the improved administration of salary schedules.

MORRISON, CORA B. Single salary schedule. *Colorado school journal*. 40: 5-12, October 1924.

NATIONAL EDUCATION ASSOCIATION. Salary scales in city school systems, 1928-29. Washington, D. C., National education association, 1929. 68 p. (Research bulletin, vol. 7, no. 3, May 1929.)

NATIONAL EDUCATION ASSOCIATION. Salary committee. Single salary schedule. In National education association Report on salaries and salary trends. 1923.

Single pay schedule: Summary of replies to a questionnaire. *School and society*, 21: 180-81, February 7, 1925.

Brief summarization of data on replies to a questionnaire regarding the single salary schedule. Includes the reasons given for the approval or disapproval of the plan by those operating it or advocating its installation. Finds the cost of the single salary plan the biggest objection to it.

A single salary schedule. *School review*, 38: 412-13, June 1930.

SCHOOLMEN'S CLUB, Kansas City, Mo. The problem of the single salary schedule. *American school board journal*, 71: 4. November 1925.

SHARP, RUSSELL A. Disadvantages and fallacies in the single salary schedule. In N. E. A. department of superintendents Official report, 1926.

STAFFELBACH, ELMER H. Some economic implications of the single salary schedule. *American school board journal*, 70: 41-42, February 1925.

A study of cost and factors involved in the adoption of single salary schedule, with special reference to California. Grants that service given by elementary school teachers is on a par with that of high-school teachers, but questions whether returns to society would justify increases in school expenditures. Concludes that more than three years' training beyond high school is unnecessary for elementary teachers, therefore a policy of requiring preparation equal to that of high-school teachers is unsound.

TOMPSON, ANNA M. Report of committee on single salary schedule. In National education association. Addresses and proceedings, 1925. Washington, D. C., National education association, 1926. p. 372-75.

WEBSTER, W. F. A single salary schedule for principals. In National education association. Yearbook proceedings, 1926. Washington, D. C., National education association, 1926. p. 488-93.

Philosophical discussion of a single salary schedule for all school principals. Defends the importance of elementary education and the complex skill required to administer an effective elementary educational program as a basis upon which such a schedule will be built, and claims that a single salary for principals is just as reasonable as a single salary for teachers.

YOUNGBLOOD, G. W. The Peru, Ind., single salary schedule. *American*

school board journal, 69: 37, December 1924.

Justifies the single salary schedule, giving reasons.

SAVINGS ACCOUNTS

[Statistics of savings accounts as related to school costs appear in research bulletins of the National education association, e. g. vol. 5, no. 1, January 1927, pages 15 and 16. Data may be located through the index at the end of each volume. Sources given]

SCIENCE COSTS

CARPENTER, WESTON W. Certain phases of the administration of high-school chemistry. *New York, N. Y., Teachers college, Columbia university*, 1926. 74 p. (Teachers college, Columbia university. Contributions to education, no. 191.)

Evaluates present practices of purchasing and accounting for high-school chemistry supplies and equipment, and suggests desirable practices in a number of city school systems.

LINDSAY, E. E. Laboratory costs in State institutions of higher learning. *School and society*, 20: 537-42, October 25, 1924.

SECONDARY EDUCATION

AID

See State Aid, High Schools; State Aid, Junior Colleges

BUDGET

REAVIS, W. C. and WOELLNER, R. Administration of the budget in secondary schools. *School review*, 37: 589-97, October 1929.

Using a survey of 522 schools as a basis for conclusions drawn, this article examines and analyzes the common practices of secondary school budget-making and administration. Explanations and statistical tabulations, arranged by sizes of school enrollments, give the number and percentage of schools practicing various procedures.

COSTS

See also Junior College Costs; Secondary Education Economics. For the secondary education costs on any particular item, e. g. Buildings or instruction, see that item and its subdivisions of High Schools, Junior High Schools, etc.

COSTS, HIGH SCHOOL

For high-school costs of any item, e. g. instruction, see High School as a sub-head of that item. See also Secondary Education Economics.

California. SEARS, JESSE B. and CUBBERLEY, ELLWOOD P. The cost of education in California. In Report of education finance inquiry committee. New York, N. Y., Macmillan co., 1924. p. 167-81, 242-60, 290-301.

—High schools cost \$192 per pupil; elementary schools show 10 per cent increase in three years. *Tax digest*, 8: 102-5, March 1930.

Connecticut. DAVIS, J. B. and KIMBAL, ELWELL F. A study of the cost of secondary education in Connecticut. Hartford, Conn., State board of education, 1924. (High-school bulletin, no. 8. Series 1923-24.)

Indiana. SIMON, DONALD L. The six-year high school in Indiana. Master's thesis, 1928. University of Chicago.

Kansas. LOOMIS, A. K. The financial aspects of school administration in small and medium sized high schools in Kansas. Lawrence, Kans., University of Kansas, 1923. 8 p.

—STONECIPHER, E. E. Cost of high schools in Southeast Kansas. Master's thesis, 1927. Topeka, Kans., State board of education, 1927.

—WILSON, LESTER, E. Cost of high schools in Northeast Kansas. Master's thesis, 1927. Topeka, Kans., State board of education, 1927.

KIRBY, THOMAS J. Costs of secondary education. University of Iowa, Iowa City, Iowa.

McMILLIN, MAE. A study of cost of a high-school education to the parent. Unpublished master's thesis, 1928. University of Southern California. 140 p.

Milwaukee. SAWYER, GUY E. Pupil-credit costs in the high schools of Milwaukee, Wis., 1923-24. Master's thesis, 1928. University of Chicago. 95 p. (unpublished).

Minnesota. LEASE, R. A. Cost and support of secondary education in the State of Minnesota. *American school board journal*, 79: 43-44, October 1929.

This study establishes per-pupil costs based on total high-school expense of secondary education in Minnesota. Schools are grouped according to population in 215 cities ranging from 5,000 or more to those having fewer than 2,500. High schools in small villages show greatest variation in median salary costs per secondary pupil. Brings out that children do not receive equal educa-

tional opportunities under present circumstances and that the burden of school support is unequal and unjust.

—STATE DEPARTMENT OF EDUCATION: A study of elementary and secondary school costs in districts maintaining class B and C four-year high schools and class B and C junior high schools and senior high schools. St. Paul, Minn., State department of education, 1930. 98 p.

Contains many detailed data relative to the operating costs of Minnesota high schools of the grades indicated.

New Jersey. High-school pupil costs for the school year 1924-25. *Education bulletin (New Jersey)*, 12: 139-44, October 1925.

Similar figures every year in corresponding bulletins.

New York State. HUNT, CHARLES W. The cost and support of secondary schools in the State of New York. A report reviewed and presented by the Educational finance inquiry commission, under the auspices of the American Council on education, Washington, D. C. New York, Macmillan co., 1924. 107 p. tables, diagrs. form. (The Educational finance inquiry, vol. III.)

This study presents data with respect to the per-pupil yearly cost of high schools, and of various high-school subjects. In both cases the data are segregated by the size of communities within the State. In addition, it investigates the school factors which have a bearing on high-school costs, and the abilities of communities of all types to support secondary schools.

Ohio. CLIFTON, J. L. Manual for computing unit costs in high school. Columbus, Ohio, F. J. Heer printing co., 1930. 39 p.

Proposes a technique for computing unit costs in high schools of Ohio. Applies this technique to the financial data of a large cosmopolitan high school and a town high school in Ohio.

Oregon. BENJAMIN, HAROLD. Subject and grade costs in Oregon high schools. *Educational administration and supervision*, 11: 231-37, April 1925.

STENSON, F. L. Factors of variation in high-school organization and costs. *High school*, 6: 75-82, February 1929.

Examines the relationship of the number of classes offered for full or part-time credit, number of periods of instruction per week, number of supervised study periods per week, and the length of the school day in minutes to total school costs and to unit costs. The investigation indicates that a program of given quality and efficiency will cost approximately the same in all schools. Excluding extravagance, school costs indicate the service the school renders.

Tennessee. JENNINGS, JOE. A study of the relative elementary and high-school cost per pupil in 30 Tennessee schools. *Peabody journal of education*, 1: 228-32, January 1924.

Texas. EVANS, A. W. High-school costs in Texas in 1924. *School review*, 34: 95-111, February 1926.

UHL, WILLIS L. The increasing costs of secondary education; are they justified? In Pennsylvania university. Fifteenth annual Schoolmen's week proceedings, 1928. p. 344-47.

An argument to the effect that the increasing costs of secondary education are justified by the results. Explains that the preparation of a greater number for college and the development of skilled tradesmen account for rising secondary school costs. While 1916-1926 secondary education costs increased 159 per cent from 1916 to 1926, bank deposits increased 293 per cent, electric meters 324 per cent, and telephone connections, 157 per cent.

U. S. OFFICE OF EDUCATION. Finance and costs. In Bibliography of secondary education research, 1920-25. Washington, U. S. Government printing office, 1926. p. 31, 32. (U. S. Office of Education. Bulletin, 1926, no. 2)

Wide range in high-school cost. *School*, 42:3, September 4, 1930.

Shows per pupil costs of large high-school buildings in New York, Buffalo, Toronto, Detroit, and Chicago. These costs range from \$857 to \$1,750. Tabulates actual costs.

WINNER, H. E. Mounting cost of secondary education. Washington, D. C., National education association. Department of secondary school principals bulletin, 30: 32-37, March 1930.

Cites specific reasons why secondary education is increasing in cost, and suggests six questions needing attention so that justification of this increase may allay criticism.

COSTS, JUNIOR COLLEGE

See Junior College Costs

COSTS, JUNIOR-HIGH SCHOOL

For Junior High School Costs of Any Item, e. g., Instruction, look for Junior High Schools as a subhead of that item

Illinois. BOOTH, W. S. The junior high school situation in Illinois. Springfield, Ill., Department of public instruction, 1931. 20 p. (State public instruction. Circular, no. 249, 1931.)

Junior high school costs. In National education association. Department

of superintendence, 1927. Fifth yearbook. p. 65-67.

A statistical study of the relative costs in 1925-26 of the elementary, junior high, senior high school grades in 13 cities of 100,000 population and more, and in 83 cities having fewer than 100,000 population each. Includes a discussion concerning values of educational undertakings and when to estimate them.

ECONOMIES

See also Secondary Education, Costs; Teaching Load; Waste

California. FORD, WILLARD S. Necessity of larger school units revealed by cost of small high schools. *The tax digest*, July, 1928. p. 232; California taxpayers' association, Los Angeles.

Shows the trend of decreasing unit costs in California high schools as the size increases. Groups of schools ranging from fewer than 100 enrollment to 600 pupils are used.

NANNINGA, S. P. Costs and offerings of California high schools in relation to size. *Doctor's thesis*, 1926. University of California, Berkeley, Calif.

A highly technical statistical study with readable summaries. Concludes that a school of 550 pupils has more curricular and extracurricular offerings, costs less than smaller schools, and approximately the same as schools with 1,400 enrollment.

HAGGARD, W. W. Where not to economize in secondary education. *National education association, Department of secondary school principals bulletin*, 30: 38-45, March 1930.

Points out relative importance rating of the 14 factors basic to school efficiency in opinions of the author and 43 other school men. Finds as to 4 most vital ones and suggestions for avoiding reduction in these factors by the administrator forced to cut expenditures. Gives table of choices of 43 schoolmen as where to economize last.

HART, F. W. and PETERSON, L. H. Economies in school housing; pupil use of blackboards in junior and senior high schools. *American school board journal*, 73: 42, 153, July 1926.

Investigates the use of blackboards in 294 regular and special classrooms of junior and senior high schools during an entire school week. Reveals that in 59 per cent of rooms no pupil used the blackboard during the week, in 20 per cent not more than 5 pupils were at the blackboard at any one time, in 14 per cent not more than 10 pupils were at the blackboard at any one time, and in only 6 per cent of the rooms more than 11 pupils used the blackboard at any one time.

OREGON STATE TEACHERS ASSOCIATION. Report of committee to measure certain factors of efficiency in Oregon

high schools. *Oregon State teachers association*, December 1928. p. 2-16.

RITCHIE, R. R. How and where to economize in secondary education. In Department of secondary school principals. Proceedings of the fourteenth annual meeting, 1930. *Berwyn, Ill., Department of secondary school principals*, 1930. p. 45-53. (National education association, Department of secondary school principals. Bulletin, 1930, no. 30.)

Reviews 10 causes of increased costs, and suggests remedies whereby administrators can effect economies without lowering standards of scholarship or impairing the instructional program.

ROEMER, JOSEPH. Weaknesses of the small high school. Remedy in consolidation. *School Executives magazine*, 48: 307-22, March 1929.

Results of a comparative study of small high schools. Shows their inadequacies and suggests remedial measures for their improvement. Recommends consolidation, since financial outlay necessary to bring small schools up to standard is not justified.

FOREIGN

Canada. County contributions to secondary education. *Canadian school board journal*, 6: 7-11, December 1926.

— The cost of secondary education; the repeaters are simply parking in the grades. *Canadian school journal*, 9: 15-6, July-August 1931.

England. ENSIGN, FOREST C. England faces a significant educational undertaking. *Nation's schools*, 3: 26-30, May 1929.

Discusses the financial implications and the social values of the recent movement in England to provide all children a secondary school education.

— GOTT, BENJAMIN. Schools and universities of Great Britain: State-aided secondary schools. *Journal of education* (London), 58: 407-9, June 1, 1926.

Philippines. ABADA, ESTEBAN H. Secondary school finance; with special reference to the academic high schools. *Philippine public schools*, 2: 304-6, October 1929.

Sweden. BOBBERSON, FRITHIOF C. The administration of elementary and secondary education in Sweden. New York, Teachers college, Columbia university, 1927. 231 p. (Teachers college, Columbia university. Contributions to education, no. 278.)

GENERAL

CLINE, ERWIN C. and CLEVENGER, GOLA H. Control of high-school finance. *High-school teacher*, 3: 264-66, 272, September 1927.

Discusses the practice of charging unauthorized purchases to school accounts, delinquency in tracing and verifying bills, overemphasis of certain activities, strangling of worthy enterprises, poorly planned use of money, muddled accounts, and lack of community feeling, as common weaknesses of high-school finance. Questions the effect of such practices upon students who come in contact with them and suggests methods for improvement.

COOK, WILLIAM A. High-school administration. Chapter on finance. Baltimore, Md., Warwick and York, 1926. 378 p.

HOOD, WILLIAM R. Legal provisions for rural high schools. *Washington, U. S. Government printing office*, 1924. p. 12-16, 24-52. (U. S. Office of education. Bulletin, 1924, no. 40.)

JUDD, C. H. The management of high-school finances. In Department of secondary school principals. Seventh yearbook, 1923. *Washington, D. C., National education association*, 1923. p. 27-34.

New Mexico. DIEFENDORF, J. W. The high-school situation in New Mexico. *Albuquerque, N. Mex., University of New Mexico*, 1931. 58 p. (University of New Mexico bulletin, vol. 5, no. 1, 1931.)

THIEL, R. B. The fiscal administration of the high school. (Doctor's thesis), 1926. *Madison, Wis., University of Wisconsin*, 1926.

URNESS, J. N. Financing the high-school education of rural pupils. Master's thesis, 1927. *University, N. Dak., University of North Dakota*.

Virginia. Secondary education in Virginia. *Charlottesville, Va., University of Virginia*, 1927. p. 547-664. (University of Virginia record. Extension series, vol. 2, no. 10.)

— Secondary education in Virginia. *Charlottesville, Va., University of Virginia*, 1929. 115 p. (University of Virginia record. Extension series, vol. 13, no. 8.)

West Virginia. HODGES, MABEL C. A study of the personal expenditures of pupils in certain high schools of West Virginia. (Unpublished master's thesis), 1928. *University of Chicago*. 75 p.

WINDES, EUSTACE E. Bibliography of studies in secondary education. *Washington, U. S. Government printing office, 1927.* (U. S. Office of education. Bulletin, 1927, no. 27.)

This annotated bibliography of 287 references on secondary education, published previous to 1927 contains a section on school finance and costs and numerous other articles dealing directly and indirectly with secondary education finance.

WITHERS, JOHN W. The trend in educational finances in the United States; particularly as related to secondary education. In *University of Pennsylvania. Thirteenth annual schoolmen's week proceedings, 1926.* p. 319-25.

JUNIOR HIGH SCHOOL

PROCTOR, W. M. and RICCIARDI, NICHOLAS. The junior high school—its organization and administration. In *Financial and legal problems. Stanford University, Calif., Stanford university press, 1930.* p. 257-71.

TERRY, P. W. and MARQUIS, W. J. Legislation on the junior high school. *Washington, U. S. Government printing office, 1924.* p. 3-11. (U. S. Office of education. Bulletin, 1924, no. 29.)

STATISTICS

[Finance statistics are to be sought in the city school statistics bulletins of the United States Office of education. See *City Schools. Statistics.* A few statistics on the values of high-school libraries appear in the *Statistics of public high schools, 1927-28.* United States Office of education. Bulletin, 1929, no. 35. The great trouble with most of the statistics in these publications is that they lump elementary and high schools together. Often the statistics of the State departments like New Jersey, Illinois, Indiana, and California which keep high-school finances separately, are preferable.]

SUPPORT

BROOKS, T. H. The great investment—secondary education in a democracy. The Inglis lecture, 1930, Harvard University. *Harvard university press, Cambridge, Mass., 1930.* 143 p.

This outstanding lecture develops, with special reference to secondary education, the thesis that "the State supports free public schools to perpetuate itself and to promote its own interests. Education, then is a long-term investment that the State may be a better place in which to live and a better place to make a living."

BUTTERWORTH, J. E. Problems in State high-school finance. *Yonkers, N. Y., World book co., 1928.* 214 p.

Discusses special State aid and supervision, county aid, stimulation and

measurement of effort, free high-school privileges, State aid for special purposes, and sources and forms of secondary educational funds in relation to the State's obligation to provide an adequate program of secondary education.

California. SEARS, J. B. Survey of Marysville, Calif., Union high school. *Marysville, Calif., Board of education, 1925.* 51 p.

—Secondary education in California. Report of preliminary survey. *Sacramento, Calif., State department of education, 1929.* 106 p.

HOOD, WILLIAM R. Local tax and State fund provisions for high-school education. In *Legal provisions for rural high schools. Washington, U. S. Government printing office, 1924.* p. 24-52. (U. S. Office of education. Bulletin, 1924, no. 40.)

Illinois. ALTHAUS, CARL B. The distribution of the tax burden of township and community high schools in Illinois. *Chicago, Ill., Illinois agricultural association, 1927.* 99 p.

Missouri. Secondary school problems. Increase of secondary schools, 1900-1925. *University of Missouri, 1927.* 48 p. (University of Missouri. Bulletin, vol. 28, no. 5, 1927. Education series, no. 23.)

MOER, P. R. Financing secondary education. *Washington, D. C., National education association, Department of secondary school principals bulletin, 30: 53-60, March 1930.*

A discussion of the increasing costs of education. States that the United States has just begun to spend for education, that in the near future secondary education must be financed and equalized on the same principle that has been applied to the support of elementary education, and that the additional tax burden inherent in this expanded educational opportunity must be carried by gross production, income, and sales taxes, in order to avoid further taxation of already over-taxed sources of revenue. Abstract in *Proceedings National Education Association 1930, p. 355-59.*

PATTY, W. W. Legal basis of the public secondary education program of the United States. *Albany, N. Y., The author, 1927.* 259 p.

Finds and synthesizes constitutional and statutory provisions relating to the financial support of public secondary education in the various States, and the decisions of the courts interpreting these provisions:

—Legal provisions for custody of, and liability for public funds for secondary school support. *American school board journal, 73: 67, 138, 140, August 1926.*

Surveys legal provisions of various State constitutions and school laws for

the custody of public secondary school funds and the protection of such funds against diversion and squander. Finds and lists 27 legal provisions in various State constitutions and school laws. Numbers States making such provisions.

Pennsylvania. When school finances fail; how a Pennsylvania town provided a needed high school. *American school board journal*, 73:94. August 1926.

Explains how the citizens of Point Marion, Pa., organized a private holding company under a legal State charter and issued \$188,000 worth of bonds to finance the construction of a school building, and how the building was rented at a rate which would pay the interest and retire the bonds upon maturity to the school board which had previously assumed its legal limit of bonded indebtedness.

Report of the subcommittee on high-school taxation and costs. *High-school quarterly*, 16:188-91, April 1928.

A discussion of the subject of larger high-school taxing units and school costs. Reports that since high-school education is a matter of general concern larger units of taxation should be established, and discusses plans for Federal, State, and county aid for secondary education and a school efficiency bureau.

STRAYER, GEORGE D. How are we to finance public education. In National association of secondary school principals. Eighth yearbook, 1924. p. 193-95.

SWIFT, F. H. What we may learn from California and Massachusetts regarding high-school support. In National association of secondary school principals. Eighth yearbook, 1924. p. 196-209. (See also *Journal of educational research*, June 1925 for a discussion of this subject by the same author.)

Describes in detail methods of collecting and distributing school taxes, and the use of various school funds, for high-school support in California and Massachusetts. Analyzes the relationship of local and State support in both outlines and accounts for the exact amounts contributed by the various taxes and funds.

TERRY, PAUL W. and MARQUIS, WILLIAM J. Financial support for general high-school purposes both senior and junior high schools. In Legislation on the junior high schools. Washington, U. S. Government printing office, 1924. p. 3, 11. (U. S. Office of education. Bulletin, 1924, no. 29.)

Texas. Secondary education, by C. H. Judd. 1925. Vol. III. (Educational survey commission report.) Austin, Tex.

Utah. Financing the elementary and high schools. In Survey of education in Utah. p. 398-506. Washington, U. S. Government printing office. (U. S. Office of education, Bulletin 1926, No. 18.)

Analyzes Utah's ability to support education as compared to that of other States, current school costs, distribution of the school funds, bonded indebtedness, and other features of the State's program for financing the elementary and secondary grades.

Virginia. PETERS, D. W. Virginia's ability to provide adequate high-school instruction. *Virginia journal of education*, 23:217-18, January 1930.

SMITHEY, W. R. Secondary education in Virginia. *University of Virginia*, 1927. p. 547-664. (University of Virginia record extension series, vol. 2, no. 10.)

Wisconsin. FOWLKES, J. G. and JONES, L. F. State support for public high schools in Wisconsin. Madison, Wis., University of Wisconsin, 1931. University of Wisconsin. (Bureau of educational research. Bulletin, 1931, no. 12.)

SICK BENEFITS FOR TEACHERS

See also Pensions

Mobile sick benefit and annuity plan. *American school board journal*, 78:132, January 1929.

SOCIAL STUDIES, COSTS

BALDWIN, J. W. The Social studies laboratory. New York. Teachers college, Columbia university, 1929. 98 p. (Teachers college, Columbia university, Contributions to education, no. 371.)

Lists of minimum equipment for the social studies laboratory in grades 4-8, junior high schools, and senior high schools separately, but no prices.

GREGORY, W. M. Visual aids in the classroom. In National education association. Department of elementary school principals. Sixth yearbook, 1927. Washington, D. C., National education association, 1927. p. 251-60.

Discusses the amount, type and use of visual education equipment in several cities. A comparative cost study is made for Cleveland, St. Louis, Chicago and Pittsburgh showing the relative costs of salaries and equipment in those cities and the amounts of various types of visual education equipment owned and used in those cities.

PARKER, E. P. Selection of map equipment for elementary schools. *Elementary school journal*, 23: 429-35, February 1928.

Discusses the problem of map equipment selection, and advocates the elimination of waste by a selection based on analyses of map values made under expert guidance. Includes criteria for map selection.

Texas. Cost of teaching the social science subjects. *Austin, Tex., University of Texas*, 1923. (Conference upon problems of education administration in Texas series.)

TAYON, R. M. History material of a geographic nature suitable for history classrooms and laboratories. *The historical outlook*, 18: 3, March 1927.

Points out the importance of geographical elements in the teaching of history. Lists 675 available historical maps, and charts the publisher and price of each. Maps and charts may usually be bought singly or in any desired combination.

SPECIAL CLASSES, COST

See also Blind, Schools for; Cripples, Schools for; Deaf, Schools for; Indian School Costs

Berkeley, Calif. Committee of Elementary teachers. Special class supplies. In *Cost of Standard equipment and supplies. Berkeley, Calif., The public schools*, June 7, 1927. p. 378-390.

MARTENS, ELISE H. Cost of special education. In *Biennial survey of education in the United States, 1928-30. Washington, U. S. Government printing office*, 1931. p. 26. (U. S. Office of education. Bulletin, 1931, no. 20, vol. 1, Chapter XI.)

Briefly discusses expenditures for this type of education. Shows that costs for educating the blind in different localities varies from \$100 to \$450, for the deaf from \$135 to almost \$500, and for the subnormal from \$70 to over \$300.

ROGERS, JAMES F. Schools and classes for delicate children. *Washington, U. S. Government printing office*, 1930. p. 9-14. (U. S. Office of education. Bulletin, 1930, no. 22.)

Per pupil costs range from \$52.77 to \$380, with an average of \$178 per annum. The cost per pupil in A. D. A. aside from teaching costs ranges from \$9 to \$263 with an average of \$83.

WHITE HOUSE CONFERENCE. Special education, the handicapped and the gifted. p. 5-6. *New York, N. Y., Century Co.*, 1931.

Gives blind, deaf, and crippled school costs.

STADIA

See also Athletics, Costs; Playgrounds

BUILDINGS

HUUS, RUDOLPH O. and CLINE, DOROTHY I. Municipal, school and university stadia. Section on cost, management and finance. *New York, N. Y., Municipal administration service*. Publication 1931, no. 18.

Analyzes data with regard to 59 stadia in the United States, showing aggregate structural cost of those in municipalities and those in connection with universities and colleges. Data on 89 stadia, college and university, show the relative use of the various methods of financing (bond issues, other types of loans, popular subscription, and gifts). Data on 10 stadia, some municipal and some college and university, show total expenditures for current operation and maintenance.

Newcastle, Pa. Financing, planning, and erecting a high school stadium. *Newcastle, Pa. Thesis*, 1925. *University of Pittsburgh, Pittsburgh, Pa.* 30 p.

Discusses need for community interest and school board cooperation in planning the financial program for the erection of high school stadia. States that steel or steel and concrete stadia can be erected at a cost varying from \$6 to \$10 per seat.

SERBY, MYRON W. The stadium. *New York, N. Y., American institute of steel construction*, 1930. p. 50-54.

The cost of the complete stadium, considering only construction estimate but no land costs or professional fees, involves many items the cost of which can only be estimated. Gives two estimates to indicate the method of computing the cost per seat. Includes a list of university, high school, municipal, and private stadia, showing date of construction, seating capacity, cost, and cost per seat for the years 1923-1925.

STATE AID

BUILDINGS

BALDWIN, ROBERT D. State school building aid programs. *American school board journal*, 75: 45-47, August 1927.

Lists and discusses provisions made by the State school laws of Alabama, Delaware, Minnesota, Missouri, Nevada, New York, North Carolina, Oklahoma, South Carolina, and Wisconsin for aiding local and county districts with rural school building construction. Concludes that the North Carolina plan seems to have had the best effects.

COVERT, TIMON. State aid for buildings in consolidated school districts. In *State aid for school consolidation and pupil transportation. Washington, U. S. Government printing of-*

See, 1931. p. 5 (Table, no. 2). (U. S. Office of education, leaflet, no. 3. February 1931.)

Presents information concerning State school funds provided especially for consolidated schools and pupil transportation. Tables 1, 2, and 3, show funds provided in 27 States. The bases for apportionment include the school, size of school, the district, the ability of the district to maintain a school, the building (size and cost), cost of transportation, vehicles used and a specified tax levy.

Delaware. DUPONT, PIERRE S. How Delaware can finance a State school building program. *Wilmington, Del., Delaware school auxiliary association*. 59 p. (Bulletin of the service citizens of Delaware, vol. 6, no. 3.)

GROSSNICKLE, FOSTER E. Capital outlay in relation to a State's minimum educational program. *New York, N. Y., Teachers college, Columbia university*, 1931. 67 p. (Teachers college, Columbia university. Contributions to education, no. 464.)

Presents a technique which will enable a State to equalize the burden of capital outlay for educational purposes, based on data secured in the State of New Jersey for the 10-year interval from 1919 to 1928, inclusive. Gives a general equation by means of which the amount of debt service to be provided for a minimum capital outlay program corresponding to the minimum current program, can be determined.

McLURE, JOHN R. Principles underlying State support for school buildings. *Alabama school journal*, 45: 3-4, December 1927.

An examination of democratic theory and a historical review of State support of education in Alabama. Concludes that the State should provide school buildings which give all the children of the State an educational program and environment of acceptable standard.

MORROW, J. ANDREW. School building subsidies; from State funds, from county funds. In *University of Pennsylvania*. Thirteenth annual schoolmen's week proceedings, 1926. p. 183-90.

COLLEGES

See State Aid, Higher Education; State Aid, Junior Colleges; Higher Education, Revenues; Higher Education, Support

CONSOLIDATION

See also State Aid, Transportation

ABEL, J. F. Increase in amount of State aid. Alabama, North Carolina, Minnesota, North and South Dakota, Tennessee, Texas, West Virginia, and Wisconsin. In *Data on consolidation of schools and transportation*. *Washington, U. S.*

Government printing office, 1925. p. 3-5. (U. S. Office of education. Bulletin, 1925, no. 22.)

State aid. Increases in and notable examples of. School consolidation and transportation. *Washington, U. S. Government printing office*, 1923. p. 26-33. (U. S. Office of education. Bulletin, 1923, no. 41.)

CAMPBELL, MACY. The financial support of consolidated schools. *Journal of education*, 105: 256-58, March 7, 1927.

COVERT, TIMON. Requirements for and amounts of State aid for current expenses (in consolidated schools). In *State aid, for school consolidation and pupil transportation*. *Washington, U. S. Government printing office*, 1931. (U. S. Office of education, leaflet, no. 3.)

Presents information concerning State school funds provided for the encouragement of consolidation and for current expenses in consolidated schools and their method of apportionment. A table shows the legal requirements for and amounts of State aid for consolidation in 15 States. Covers State aid for school buildings in consolidated districts with tabulated data for the eight States granting such aid.

State aid for consolidation. In *Rural school consolidation*. *Washington, U. S. Government printing office*, 1930. p. 11-12. (U. S. Office of education. Pamphlet, no. 6, 1930.)

Pennsylvania. SHAW, ROBERT C. Progress in consolidation in Pennsylvania. In *Proceedings of the National education association*, 1928. p. 496-500.

Points out State aids to consolidation.

CRIPPLED CHILDREN

HECK, ARCH O. State aid for education of crippled children. In *Education of crippled children*. *Washington, U. S. Government printing office*, 1930. p. 4. (U. S. Office of education. Bulletin, 1930, no. 11.)

New York State. State aid to counties for physically handicapped children. *Albany, N. Y., University of the State of New York*, 1926. 15 p. (Bulletin, no. 858, August 15, 1926.)

ELEMENTARY SCHOOLS

See also Equalization

BRIGGS, CLAUDE. State support of public elementary and high schools in North Carolina since 1868. *Raleigh, N. C., State department of education*, 1930.

California. LENTZ, ALFRED E. California elementary school district support. *Sierra educational news*, 26: 50-52, 64, November 1930.

A statement concerning California laws relating to collection of school taxes and a recommendation for several changes in these provisions which should increase State and county support of education.

WHITNEY, F. L. and KING, L. E. State aid for elementary schools. *Elementary school journal*, 31: 678-83, May 1931.

GENERAL

See also Equalization; State Support

AMBLER, JAMES C. Sources and distribution of public school funds. *Virginia journal of education*, 21: 155-59, December 1927.

BLUETT, CHARLES G. Distribution of school funds. *Oregon education journal*, 2: 15, 39-40, March 1928.

CAPLINGER, WILLIAM J. State aid for various school projects in twenty-four States. M. A. thesis. 1924. *Ohio State University, Columbus, Ohio*.

CARBOLL, CHARLES. Malapportionment: its symptoms and causes, and the remedy. *American school board journal*, 70: 37-39, February 1925.

CLARK, HAROLD F. Measuring the ability of poor townships to support schools. *American school board journal*, 75: 69, 143-44, August 1927. Also printed in Indiana university, school of education. Thirteenth annual conference on educational measurements, 1926. p. 73-78. Bulletin, vol. 2, no. 5.

Examines the wealth of some rural districts which are found obviously too poor in natural resources to support schools or any other public enterprise, and contends that apportioning State aid to such districts actually encourages people to live there, when, as a final solution of the difficulty, they should be encouraged to move to a more fertile district.

COOK, K. M. State aid and equalization. Sources and distribution of State school funds. State-wide studies of school support. In Progress of rural education, 1925-28. Washington, U. S. Government printing office, 1927. p. 3, 5-8 (U. S. Office of education. Bulletin, 1927, no. 15.)

State's contribution to the schools: some outstanding tendencies. *American school board journal*, 78: 124, February 1929.

Deals with the State's responsibility toward administration and support of

elementary and secondary education in the equalization of the tax burden and educational opportunity. Twenty-four States have adopted some type of equalizing measures. The trend is toward more State participation in school support.

CUBBERLEY, E. P. Apportionment and subsidies. In his State school administration. New York, N. Y., Houghton Mifflin co., 1927. p. 450-88.

Examines the various single bases used at present for the apportionment of school funds, and those which might better be used, as a method of formulating some principles which should control the distribution of State school subsidies. Evaluates various apportionment plans in the light of these principles.

Determining the purpose of a State distributive fund. *Illinois teacher*, 15: 79-83, January 1927.

ENGELHARDT, F. Public school organization and administration. Boston, Mass., Ginn and co., 1931. p. 494-501.

Finds State and National participation in the support of public schools increasing. Contrasts plans of allocating State aid according to ability and effort.

Florida. Bases of apportioning State general school funds in the United States. *Journal of the Florida education association*. 4: 14-17, April 1927.

HARRIS, T. H. The State's financial responsibility to the public schools. In National education association. Addresses and proceedings, 1925. p. 549-54.

KOCH, J. W. Constitutional provisions for permanent common school funds in the several States. M. A. thesis 1930; *Ohio State University, Columbus, Ohio*.

Legislation relative to State school support. *School and society*, 31: 231-32, February 15, 1930.

LEHMAN, CLARENCE O. Analyzing the value of State aid for school projects. *Nation's schools*, 8: 41-48, June 1931.

The fourth of a series of articles by this author dealing with state aid. Presents an appraisal of the effectuality of state aid for special school projects in six States, with special reference to Wisconsin.

How State funds are spent for local activities. *Nation's schools*, 7: 61-65, February 1931.

Figures for general and special project aid by States for 1925-26, trends as shown in legislation for 1926-28, and roster by States of special projects authorized but not carried out. Finds no unanimity of opinion in the States and a need for a scientific investigation to show just how State aid for a special school project may be safely abandoned.

—The legal status of State aid for special school projects in the United States. Ph. D. thesis. State Teachers college, Geneseo, N. Y., Ohio State university, Columbus, Ohio.

—What the States are doing for public education (bibliography). *Nation's schools*, 6: 49-54, November 1930.

McCUISTON, C. E. Financing schools in the South—some data regarding sources, amounts, and distribution of school revenue in southern States. Nashville, Tenn., State department of education, 1930. 29 p.

MOEHLMAN, ARTHUR B. Looking forward—abstract. In National education association. Department of superintendence official report, 1932. Washington, D. C., February 1932. p. 207-8.

Montana. Summary of methods of distributing school funds in other States. In Superintendent of public instruction. Nineteenth biennial report, 1926. Helena, Mont., State superintendent, 1926. p. 18-19.

—Tendencies in school finance in other States. In Superintendent of public instruction. Eighteenth biennial report, 1924. Helena, Mont., State superintendent, 1924. p. 11-12.

—What other States have done since 1926. In Superintendent of public instruction. Twentieth biennial report, 1928. Helena, Mont., State superintendent, 1928. p. 12-13.

MORT, PAUL R. Needed research in the field of state aid. *Teachers college record*, 27: 707-12, April 1926.

Shows the need of research into the findings of the Educational Finance Inquiry, relating to equalization, reward for effort, unit cost of minimum educational offerings, an index for measuring transportation burdens, the cost of living effect upon educational need, and equalization for capital outlay.

—State support for public schools. *New York N. Y., Teachers college, Columbia university*, 1926. 104 p. (School administration series.)

Sets up criteria for adequate system of State support, devises a measure of local educational need and ability to support education and outlines a plan for equalizing the burden of support among the various localities of a State.

—The measurement of educational need. *New York, N. Y., Teachers college, Columbia university*, 1924.

84 p. (Teachers college, Columbia university. Contributions to education, no. 150.)

This outstanding pioneer study defines the relation of the measurement of need to educational administration and describes the weighted pupil plan and standards for measuring educational need. Develops size standards for one teacher schools and a more accurate method of measuring the ability of districts to support education. Applies these techniques to measuring the finance needs of the various New York State school districts.

—What the State owes to public schools, *Illinois teacher*, 16: 6-7, 24-25, May 1928.

An outline of the essential elements of State support and a State equalization fund. Includes techniques for defining a State educational program, methods of distributing the tax burden equally by means of either a large or small State fund, and the implications of an equalization program.

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Gives reasons for fixing minimum local school tax rates, for establishing an equalizing apportionment which recognizes differences in local financial ability to support schools, for State apportionment of at least 20 per cent of the operating costs of public schools, for abolishing census and enrollment statistics as bases of apportionment, and for a continuous study of the State apportionment system.

—Apportionment of State aid to public schools—A selected and annotated bibliography. Washington, D. C., National education association, 1929. p. 1-11. (Research bulletin, 1929.)

—Roll call by States as to plans affecting State school finance legislation. *Research bulletin of the National education association*, 5: 52-55. January 1927.

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NOBLE, JR., M. C. S. Teacher load as a basis for distributing State school aid in the United States. Raleigh, N. C., State department of education, 1930.

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PICKELL, F. G. What education should be publicly financed? *School executives magazine*, 49: 67-69, October 1929.

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SLAS, A. B. The financing of a State school system. Doctor's dissertation. *Stanford university, Calif., Leland-Stanford university*, 1926.

SIMPSON, ALFRED D. State and Federal aid. In *Review of educational research*. Finance and business administration number, vol. II, no. 2. April 1932. p. 148-62, 180-82. *American educational research association, Department of National education association, Washington, D. C.*

Running review and bibliography of researches in this field, stressing those from 1923 to the fall of 1931.

SWIFT, F. H. Forty years of progress in State policies of financing public schools. *American school board journal*, 82: 37-39, 118, March 1931.

This article questions the attitude that fiscal policies have failed to keep pace with progress in other fields of educational effort. The discussion of achievement in this field centers about the increasing generosity toward public schools, new conceptions of State responsibilities, rise of equalization funds, progress in tax policies, budget systems adopted, and progress in Federal policies.

— State school funds and their apportionment. *American school board journal*, 76: 39-41, February 1928.

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— and ZIMMERMAN, B. A. State school taxes and school funds and their apportionment. *Washington, U. S. Government printing office*, 1928. 431 p. (U. S. Office of education, Bulletin, 1928, no. 29.)

A comprehensive compilation of the types of taxes the States levy and to

what extent the proceeds of such taxes are devoted to public school support. Explains in great detail school funds provided in each State and the principles governing their apportionment. Tabulates many relevant data.

TIDWELL, R. E. The fiscal aspects of articulation. In *National education association. Department of superintendence. Ninth yearbook*, 1931. *Washington, D. C., National education association*, 1931. p. 322-39.

TRELOAR, Wm. BUTLER. State aid for various school projects in twenty-four States (Nebraska to Wyoming) incl. M. A. thesis, 1928. *Ohio State University, Columbus*.

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WORKS, GEORGE A. Organization and financial support. In *Ohio State educational conference. Proceedings of fifth session*, 1925. p. 165-76. *Ohio State university. (Bulletin, vol. 30, no. 2, 1925.)*

— The relation of the State to the support of education. *Elementary school journal*, 27: 335-43, January 1927.

A critical examination of the New York plan of equalizing educational opportunity. Maintains that a refusal on the part of the State to give financial encouragement to local educational effort may be fundamentally unsound in so far as effort is probably a basis for educational progress.

WRIGHTSTONE, J. WAYNE. Dissertation in press *Bureau of publications, Teachers college, Columbia university, New York City*. 1932. Exact title not chosen in April, 1932.

A study of data from New York cities and villages which shows that State aid for special phases of education has produced no greater expenditures and no better results than have come about in similar special phases receiving only general State aid.

HIGH SCHOOL

BRIEG, CLAUDE. State support of public elementary and high schools in

North Carolina since 1886. *Raleigh, N. C. State Department of Education, 1930.*

BUTTERWORTH, JULIAN E. Problems in State high school finance. *Yonkers, N. Y., World book co., 1928.* 214 p.

Discusses special State aid and supervision, county aid, stimulation and measurement of effort, free high school privileges, State aid for special purposes and sources and forms of secondary education funds in relation to the State's obligations to provide an adequate program of secondary education.

FOWLKES, J. G. What should be the State's part in high school support? Abstract. *Washington, D. C., National education association, 1931.* p. 173-4. (Department of Education Office Report, 1931.)

Recommends State guarantee of sufficient funds to support a minimum high school program, the levy of new taxes for the support of secondary education, studies of the type and relative importance of various taxes now used in the support of public education within a State, better administration of present personal taxation, and more effective allocation of corporation taxes.

PATTY, W. W. Legal provisions for custody of, and liability for, public funds for secondary school support. *American school board journal, 72:* 47-48, 144, March 1926, 73: 67, 138, August 1926.

Surveys the legal provisions made in various State constitutions and school laws for the custody of public secondary school funds and the protection of such funds against diversion and squander. Lists 27 legal provisions found in State constitutions and school laws with the number of States making such provisions.

Methods of apportioning public funds for secondary school support. *American school board journal, 72:* 52-53, 157, June 1926.

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Wisconsin. FOWLKES, J. G. and JONES, L. F. State support for public high schools in Wisconsin. *Madison, Wis., University of Wisconsin, 1931.* 82 p. (Bureau of education, University of Wisconsin, research, bulletin, no. 12.)

HENDERSON, H. L. A plan for reorganizing Wisconsin's system of education. *Madison, Wis., State Department of education, 1931.* p. 182-208. (Chapter 7.)

Discusses a proposed plan for State aid to high schools and tabulates statistics showing amounts of State aid due each high school district under the provisions of the plan.

HIGHER EDUCATION

See also State Aid, Junior Colleges; Higher Education, Support

THURBER, CLARENCE H. State aid for higher education. *Educational review, 67:* 252-56, May 1924.

Says that a study of all the different forms of fiscal support given by States in their higher educational institutions shows that 63 institutions of 84 investigated receive State aid through annual or biennial appropriations.

JUNIOR COLLEGES

See also Higher Education, Support

Indiana. American council on education. Junior colleges by State funds. *American educational digest, 46:* 313-14, March 1927.

A short unfavorable editorial discussion of a proposed Indiana law to establish a junior college in each city having a school population of 2,000 or more. Includes provisions of the proposition.

Financial support of municipal universities. *School and society, 31:* 74-80, January 1930.

Discusses State aid for municipal higher education as applied to the municipal university and outlines State support of junior colleges in several States and in city teacher-training institutions.

LAWSON, FRED. State aid for public junior colleges. *The junior college journal, 1:* 487-93, May 1931.

Reviews and summarizes legislation in various States for financial aid of junior colleges.

MORT, PAUL R. State participation in the financing of junior colleges. *Teachers college record, 30:* 745-51, May 1929.

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ROBBINS, C. L. Small junior colleges and adult education. *The junior college journal, 1:* 557-58, June 1931.

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See also Library, Support

FULGHUM, SUSAN. Report of State library aid to schools 1928-1930 and a summary report for 1923-1930. *Raleigh, N. C., State department of education, 1931.*

KOOS, FRANK H. Revenue. In State participation in public school library service. *New York, N. Y., Teachers college, Columbia university, 1927.* p. 11-13, 19-21, 63-72. (Teachers college, Columbia university. Contributions to education.)

KUMLTEN, W. F. Equalizing library opportunities. *South Dakota education association journal*, 5: 322, 334, February 1930.

MORSE, H. N. and ANDERSON, C. D. State aid for free school libraries. In New Jersey State federation of district boards, 1870-1927. Trenton, N. J., New Jersey State federation of district boards, 1928. p. 97-99.

State and county grants for school libraries. *Elementary school journal*, 29: 733-34, June 1929.

Presents United States Office of Education statistics for State and county grants for school libraries 1918-24. Shows that the establishment and maintenance of school libraries in rural communities are provided for by law in 16 States and county grants for similar purposes are authorized by statutes in 12 States. Quotes various maximum yearly amounts granted by counties.

RURAL

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ARKANSAS. DAWSON, HOWARD A. Financing relief for rural schools in Arkansas. *Journal of Arkansas education*, 5: 14-16, April 1927.

BALDWIN, R. D. Financing rural education. *Stevens Point, Wis., Rural service press*, 1927. 207 p. (Rural education series. Vol. I, 1927.)

Analyzes provisions in the several States for general and special State aids for small schools including those for consolidation, transportation, high schools, tuition of nonresident students, rural supervision, rural buildings, and teachers salaries. Suggests three plans for State school financing.

The problem of the State in providing aid for rural supervision. *Educational administration and supervision*, 13: 411-22, September 1927.

Excerpts from the school laws of California, Connecticut, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Rhode Island, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin revealing legal provision for State financial aid for rural school supervision are reproduced. Explanatory statements accompany the citations.

BRAND, CHARLES. Federal aid and rural schools. *School and society*, 30: 62-63, July 13, 1929.

A Congressman explains that rural wealth is being drained into cities by young people who after being educated by rural money in rural schools, take positions in cities. An annual Federal aid fund of \$100,000,000 for rural elementary education is proposed as a just method of redistributing the tax collections.

ELSERIE, WILLARD S. Educational need and State aid, a sample case. *Journal of rural education*, 4: 301-03, February-March 1925.

This article describes briefly the financial and educational implications of supporting a 1-teacher school in a sparsely populated rural district and suggests some financial and social advantages of consolidation.

LOGAN, JOHN H. The State and the rural school. In National education association. Addresses and proceedings, 1926. p. 583-88.

Pennsylvania. ANDERSON, C. A. Financial phases of the report of the committee on State appropriations and subsidies as related to rural education. *Twelfth annual schoolmen's week proceedings*, 1925. University of Pennsylvania. pp 119-23.

State aid to schools. *Better rural school bulletin*, 5: 20-21, February 1927.

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MARRS, S. M. N. Federal aid to rural schools. *Texas outlook*, 13: 19, July 1929.

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and ATWELL, S. Concerning State aid for training in agriculture, farm mechanics, and home economics in rural schools. *Austin, Tex., State department of education*, 1929. 15 p. (Bulletin, no. 258, 1929.)

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WHITMER, JOHN W. Distribution of the equalization fund within the county school district. *Ohio schools*, 5: 139, 144-45, May 1927.

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See also Equalization, States, Individual; State Support

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— SWIFT, F. H., and GOLDTHORPE, J. H. Public school finance in Alabama. In *Studies in public school finance: The South: Arkansas, Oklahoma, Alabama, Tennessee. Minneapolis, Minn., University of Minnesota*, 1925. p. 87-130. (Research publications of the University of Minnesota. Educational series, no. 4.)

— and ZIMMERMAN, B. L. State school taxes and school funds and their apportionment. *Washington, U. S. Government printing office*, 1928. 431 p. (U. S. Office of education. Bulletin, 1928, no. 29.)

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— YOUNG, DALE S. The distribution of certain State funds. *Alabama school journal*, 46: 12-13, 15-17, April 1929.

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ommends more county and State support, State severance and income taxes, and a modern system of State aid.

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— SWIFT, F. H. State systems of taxation for public schools; the Connecticut plan. *American school board journal*, 78: 65-66, 150, 152, May 1929.

— WALKER, HELEN MARTIN. Development of State support and control of education in Connecticut.

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SWIFT, F. H. Results of State administration of educational endowments with special reference to Idaho. *Idaho public school trustees association. Boise, Idaho*, 1932.

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Illinois. A proposed new plan of State aid apportionment. *Illinois teacher*, 15: 184-87, 189, 191, 193, May 1927. tables.

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MORRISON, H. C. The financing of public schools in the State of Illinois. *New York, N. Y. Macmillan co.*, Educational financial inquiry commission, 1924. Vol. 9.

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nomie consequences of an unsound tax base and suggests remedies. Analyzes the State school indebtedness. Discusses the need and processes of taking some account of terminal costs.

Final report of 1926 to committee of State school fund. *Springfield, Ill., State teachers association*, November 20, 1926. 29 p.

Realizing State's financial responsibilities toward common schools. *Illinois teacher*, 16: 2-5, November 1927.

State school fund crisis in Illinois. *Illinois teacher*, 17: 34-39, 60, October 1928.

STATE TEACHERS ASSOCIATION. DEPARTMENT OF RESEARCH AND STATISTICS. State aid apportionments to large city school districts. *Illinois teacher*, 14: 145-53, April 1926.

Report of committee on distribution of State school fund. *Springfield, Ill., State teachers association*, December 15, 1926. 39 p.

Outlines and discusses an effective method for the distribution of the Illinois State school fund under six general headings. These are: Education as a function of the State; distributive fund laws and the disposition of the services of our Government; an outline of statements concerning the need for equalization; determining the purpose of a State distributive fund; conclusions; and a proposed plan of distribution.

State aid claims by various types of districts. *Illinois teacher*, 14: 164-69, May 1926.

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DODD, J. H. Should the State or the local support of schools in Kentucky be increased. *Kentucky school journal, 4: 18-25,* January 1926.

Maine. STATE DEPARTMENT OF EDUCATION. Bulletin of information, February 1930. *Augusta, Me., State department of education,* February 1930. 25 p.

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- STATE DEPARTMENT OF EDUCATION. School money apportionment. *Jefferson City, the department, 1932.* 98 p. (Department of education bulletin, vol. 6, no. 2, February 1932.)
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- Montana. STATE DEPARTMENT OF MONTANA. 1931 legislation budget of the State of Montana, showing actual receipts and disbursements of all funds and departmental costs for years 1928-29, 1929-30, and estimated revenues and expenditures for 1931-33. *Helena, Mont., 1931.*
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- Should the State assist in supporting the public schools? A symposium by leading Nebraskans. *Nebraskan education journal, 10: 58-60, February 1930.*
- MORT, PAUL R. The status of taxation in Nebraska. *Lincoln, Nebr., State teachers association, 1928.* 18 p. (Research bulletin, no. 4, November 1928.)
- SCOTT, H. W. Annual report of the State tax commissioner and the State board of equalization and assessment for the year 1930. In Tax commissioners report. *Lincoln, Nebr., State publication house.* 164 p.
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- State aid to elementary education in New Hampshire—Concord. *Boston, Mass., Scovell, Wellington & co., 1925.* 11 p. (Multigraphed.)
- Reports data concerning New Hampshire's aid to elementary education as result of investigation authorized by legislative enactment.
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- Discusses State school fund, State aid for libraries, industrial and manual training education, evening schools for foreign born, and vocational education. Chapter 9—total State aid.
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STATE, GENERAL

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— and GOLDTHORPE, J. A. Studies in public school finance; the South: Arkansas, Oklahoma, Alabama and Tennessee. *Minneapolis, Minn., University of Minnesota*, 1923. 224 p. (Research bulletin. University of Minnesota. Educational series, no. 4.)

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— DEL PLAINE, F. K. and TROXEL, O. L. Studies in public school finance: the middle West: Illinois, Minnesota, South Dakota and Alaska. *Minneapolis, Minn., University of Minnesota*, 1925. 329 p. (Research bulletin. University of Minnesota. Educational series, no. 3.)

Treatments of status and problems about 1924 for typical middle west

States: Illinois because it has regarded permanent school funds as belonging to the localities; Minnesota because it has developed a large State school fund by taxes on natural resources; South Dakota because nearly all State school income is from the permanent school fund; Alaska is added. For details see sections on individual States, e. g., Illinois.

STATE STATISTICS

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[This section duplicates without annotations all references specifically bearing on a particular State and also includes other references so bearing. Annotations for the more important references may be expected in the other parts of the bibliography where a given reference appears, alphabetically by its State name under a pertinent head. Thus, P. R. Mort's Kansas equalization study appears with annotation under Equalization, States, Individual, Kansas]

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STATISTICS, SCHOOL

Look for these as a subhead of the item on which data are desired, e. g., City schools, costs, statistics

SUMMER SCHOOL COSTS

See also Vacation School Costs

[A few cost data appear regularly in the bulletins of the United States Office of education on State school systems and city school systems]

ANDREWS, B. R. Student costs in teachers college, Columbia university, summer sessions. *School and society, 25: 633, February 1927.*

AVENT, J. E. Study of summer sessions in teachers colleges. In National education association, National council of education. *Washington, D. C., National education association, 1925.*

DIXON, JOHN D. A plan for the organization and administration of a high school summer school. Master's thesis, 1932. *University of Wisconsin, School of education, Madison, Wis.*

Illinois. The status of summer schools in the secondary schools of Illinois. *Springfield, Ill., State department of education, 1927.* 69 p.

ODELL, CHARLES W. Summer work in public schools. Urbana, Ill., University of Illinois, 1930. 42 p. (University of Illinois. Bulletin, vol. 27, no. 34, April 22, 1930.)

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SUPERVISION COSTS

See also Supply Costs

California. Supervision economies. In California schools. *State department of education. Sacramento,*

Calif., March 1932. Vol. 3, no. 3, p. 67-68, 76-77.

CRESSMAN, ELMER. Cost and allocation of supplies as factors in supervision. In *Fifteenth annual schoolmen's week proceedings, 1928.* p. 405-17. *University of Pennsylvania, Philadelphia, Pa., 1928.*

Analyzes the extent and significance of variations found in the per-pupil costs of supplies for various subjects in a given school, and variations in the costs of supplies for a given subject in various schools of Philadelphia. Discusses the relationship between costs and efficiency of instruction. Includes supplementary graphs.

REED, C. R. Economies to be effected in the supervisory and administrative organization. In Ohio State educational conference. Fourth annual proceedings, 1924. p. 136-41. *Ohio State university. (Bulletin, vol. 20, no. 2.)*

REYNOLDS, ANNIE. Supervision and rural school improvement. *Washington, U. S. Government printing office, 1930.* 42 p. (U. S. Office of education. Bulletin, 1930, no. 31.)

A section discusses the financing of supervision in rural schools. Tabulation of salaries of rural supervisors in 19 states.

WOOD COUNTY (OHIO), SUPERINTENDENT. County supervision and school costs; attendance and school costs; cost of school supervision in Wood county school district; supervision program for 1923-24.

WRIGHTSTONE, J. WAYNE. Dissertation in press, *Bureau of publications, Teachers college, Columbia university, New York City, 1932.* Exact title not chosen in April, 1932.

Showing, among other things, that the right kind of supervision and stimulation from a State department is more effective in promoting special phases of education than any form of special State aid for these phases.

SUPPLIES

ACCOUNTING

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ENGELHARDT, FRED and VON BORGERS-RODE, FRED. Accounting procedure for public school systems. *New York, N. Y., Teachers college, Columbia university, 1927.* Chapters V, X. (School administration series)

A comprehensive treatment of the problem of handling school supplies, including requisition, purchase, storage, use, and distribution, with facsimile copies of various necessary forms.

LINDGREN, G. O. Accounting for the use of supplies in a school. *American school board journal*, 81: 42, November 1930.

BUDGET

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Statistics showing current practices in school supplies with special reference to instructional and janitorial-engineering supplies; and amount per unit of cost of equipping a given school unit.

CLARK, H. F. Budgetary procedure in respect to school supplies. *South Dakota education association journal*, 3: 579, June-July 1928.

In defense of the thesis that a teacher should be permitted to exceed the standard quota of supplies if her method calls for an excess, this article contends that waste lies not in the use, but in the careless purchase of supplies and recommends some research that will tabulate and provide cost trends to school purchasing agents.

A principal's budget for school supplies. *American school board journal*, 75: 69, July 1927.

How the principal should formulate his budget for supplies systematically, basing needs upon past use and anticipated wear or depreciation upon furniture.

School budgeting of supplies and equipment. *American school board journal*, 72: 74, April 1926.

Short editorial pointing out the advisability of budget control by school administrators and anticipatory assembling by budget items for purchasing school supplies and equipment before summer rush. The latter procedure insures prompt service and lowest market price.

SUPPLY COSTS

See also Supervision Costs

A five year study of the cost of school supplies. *Flint, Mich., Bulletin of education*, 2: 11, June 1926.

FOWLKES, JOHN GUY, and others. Allotments and costs of janitorial-engineering supplies. *American school board journal*, 79: 69, 147-48, July 1929.

Reviews prices and sets up standards of distribution for the use of janitorial-engineering supplies.

JONES, LEE F. Cost and allotment standards for school supplies. Ph. M. thesis, 1928. *University of Wisconsin, School of education, Madison, Wis.*

LAPOR, JAMES L. The cost of adequate intermediate grade reading materials in Allegheny county, Pennsylv-

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Determines the amount of time necessary for a normal child reading at a uniform rate to read all the material now furnished his grade, estimates the amount of material that should be provided and the cost in dollars and cents, and determines the additional levy necessary to meet such cost. Shows the amount and cost of reading matter supplied to intermediate grade children, and the cost of certain other books. Includes an explanation of the statistical devices and many data used in the investigation.

Standard equipment and supplies. *Berkeley, Calif., Public schools*, June 7, 1929. 390 p.

Covers building, general, kindergarten, grades I, to VI separately, and special classes. Gives detailed and easily accessible information on exact kinds and amounts needed, prices, and vendors.

375% variation in prices of school supplies discovered in San Diego county. *Tax digest*, 6: 173-76, May 1928.

TRITT, W. W. and NETTELS, C. H. The cost of high school supplies. *Educational research bulletin, Los Angeles*, 7: 5-6, January 1928.

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See Supply Purchasing

MANAGEMENT

ANDERSON, C. J. and FOWLKES, JOHN GUY. The selection, purchase and distribution of school supplies. *American school board journal*, 77: 49-50, 161, July 1928.

Discusses such phases of competitive buying as securing bids, deliveries, securing prices for material other than that carried in the general storehouse, purchase orders, confirmation orders, and inventories.

ATKINSON, C. County superintendent as a school supply distributor. *School executives magazine*, 50: 413-14, May 1931.

An argument for the buying of supplies for all the rural schools in a county by the county superintendent, or through his office. This system eliminates wasteful methods of individual purchasing and at the same time gives the smaller communities more educational service for the money expended.

BROWN, JAMES F. The purchase, storage, and distribution of school supplies in Cleveland. In Ohio State educational conference. Seventh annual proceedings, 1927. p. 484-86. *Ohio State university*. (Bulletin, vol. 32, no. 3.)

CONRAD, C. W. School supply management. *School executives magazine*, 40: 416-17, May 1931.

A report of an investigation to determine the most efficient and economical

procedure to be followed in the administration of school supplies. The recommendations and suggestions submitted are based upon the opinions of a large number of individuals directly and indirectly connected with supply management.

GRILL, GEORGE W. Purchase, storage, and distribution of supplies. *American school board journal*, 73:71, July 1928.

Hamtramck, Mich. BOARD OF EDUCATION. Finance procedures; techniques in accounting, budgeting, and service of supplies of the Hamtramck, Mich., public schools, prepared for the board of education, Hamtramck school district, 1928. *Hamtramck*, 1928.

An unusually practical handbook describing in detail the accounting code, the accounts, the internal accounting procedure, the subject cost procedure, the service, textbooks and equipment, and the budgetary procedures used in the supply administration. Reproduces forms.

HARAP, HENRY. The new curriculum and instructional supplies. *Journal of educational method*, 7:304-11, April 1928.

Analyzes the curriculum of the modern school, notes the need for a different type of supplies in keeping with new subject matter and the individual needs of various localities, estimates the costs of such equipment, and suggests methods for securing the changes.

HIBBERT, RUSSEL W. The why and how of a semi-standard supply list. In Proceedings of the twentieth annual meeting of the National association of public school business officials, Richmond, Va., May 19-22, 1931. Trenton, N. J., MacOrellish and Quigley Co., 1931. p. 55-67.

Points out details for procedure in handling school supplies. Uses figures for St. Louis schools to illustrate procedure.

HOLY, T. C. Directory of building material, supply, and school equipment companies. *Educational research bulletin*, 6:309-38, October 26, 1927.

McCLINTON, J. W. Labeling plan for janitor supply products. *American school board journal*, 81:49, July 1930.

MORRISON, HENRY C. Operating material. In *his* The management of the school money. Chicago, Ill., University of Chicago press, 1932. p. 360-90.

Stimulating theoretical treatment with practical illustrations. Includes warehousing, purchasing.

MULLAN, J. S. Economical administration of school supplies in larger cities—Abstract. In National education association, department of superintendence official report, 1932. Washington, D. C., National education association, February 1932. p. 241-43.

Selection, purchase, storage and distribution of public school supplies. In National association of public school business officials. Proceedings, 1930. p. 74-84.

The Rochester plan of administering school supplies. In Ohio State educational conference. Ninth annual proceedings, 1929. p. 493-502. *Ohio State university bulletin*, vol. 34, no. 3.

Describes the policies in selecting, purchasing, and accounting for school supplies and the administrative set-up for the execution of those policies.

NASH, R. W. Getting full value in school supplies. *American school board journal*, 76:40, July 1928.

Nebraska. MATZEN, JOHN M. Codification of expenditures for school supplies. *Educational research record*. (University of Nebraska publication), 4:1-4, October 1931.

STOUFFER, S. M. Economical administration of school supplies in smaller cities—Abstract. In National education association, department of superintendence official report, 1932. Washington, National education association, February 1932. p. 243-44.

Suggested list of supplies and equipment for ungraded classes. *Ungraded*, 9:87-90, January 1924.

TAYLOR, R. B. Principles of school supply management. New York, N. Y., Teachers college, Columbia university, 1926. p. 64-86.

Discusses an efficient and economical procedure in the administration of supplies applicable to the public school systems. Recommends that the superintendent of schools should be responsible for the management of school supplies.

WAGNER, H. C. Janitorial supplies for schools. *American school board journal*, 77:46, December 1928.

PURCHASING

See also Purchasing Economies

Atlanta, Ga. Board of education. Catalogue of supplies.

A loose leaf volume listing alphabetically under main heads all items of supplies without regard to where they will be used. Useful as a check list for the purchasing agent or business manager.

- BIRD, ROBERT L. Cooperative purchasing of school supplies. *Sierra educational news*, 23: 350, June 1927.
- BUCKALEW, HARRY L. The purchase of school supplies. *American school board journal*, 75: 66-67, July 1927.
Points out the advantage of the county unit in purchasing school supplies. Includes information concerning practices in the various States and tables showing possible saving by the county plan in Alameda County, Calif.
- Buying school supplies. *American school board journal*, 75: 79, July 1927.
- CALIFORNIA TAXPAYERS' ASSOCIATION. Centralized purchase of school supplies. Report no. 23, May 1928. Los Angeles. 5 p. ms.
— Purchase of supplies in Kern county. Report no. 178, May 1931. 6 p. ms.
- Cooperative purchasing of supplies. *American school board journal*, 75: 121, August 1927.
- Cooperative purchase of school supplies in California. *American school board journal*, 75: 82, November 1927.
Describes the law passed in California in 1927 which charges county boards of education with the establishment of rules and regulations whereby elementary school districts may purchase standard school supplies and equipment through the county superintendent of schools or through the county purchasing agent. Points out that the county board of education must list as standard school supplies and equipment those which may be advantageously purchased in quantity.
- ENGELHARDT, N. L. Studies in school equipment. *School executives magazine*, 50: 426, May 1931.
Summarizes printed studies on equipment and supplies made in the school systems of Berkeley, Calif., and Atlanta, Ga.
- GAISER, SAMUEL. Purchase of equipment and supplies. *American educational digest*, 45: 533-35, 565-66, August 1926.
- GRILL, GEORGE W. Centralized purchase of supplies and equipment. *School executives magazine*, 49: 5-7, September 1929.
Touches upon the establishment of standards, the cutting down of supply varieties, purchasing in large lots, and adequate records for the department.
- HALL, J. WALTON. Getting full value out of purchasing. *Virginia journal of education*, 26: 67, October 1928.
- HANLON, WILLIAM H. Centralized purchasing plan worked out; *The tax digest*, January 1928, p. 11; *California taxpayers' association*, Los Angeles.
How the county school superintendent of Contra Costa County set up the administration of the centralized school supply purchasing act.
- HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter IV. The purchasing, handling, and utilization of supplies. *University of Nebraska, extension division, Lincoln, Neb.* 1932. p. 27-59, 173-77. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)
Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.
- JOHNSON, W. P. Problems affecting the publishing business and the teaching profession. *School executives magazine*, 51: 56-57, October 1931.
A sensible article by a publisher discussing uniformity, samples, mimeographing, budget percentages, and economy in seat work materials.
- JOLLIEF, JOHN H. Some guiding principles in buying school supplies. *Progressive teacher*, 36: 13, 43-44, October 1928.
- KELTY, C. V. Buying school supplies. *American school board journal*, 81: 43-44, July 1930.
— Buying school supplies. *Sierra educational news*, 23: 268-69, 288-89, May 1927.
- KRASSNER, FREDERICK. Technical aspects of the purchase of soaps and cleansers. *Educational business manager and buyer*, 7: 21-23, 30, May 1931.
- LACK, M. D. Centralized school purchase act; *The tax digest*, March, 1927, p. 80-83. *California taxpayers' association*, Los Angeles.
Presents reasons and arguments for centralized purchasing of standard school supplies with examples of wide variations in unit prices paid under the old system.
- LOVEJOY, P. C. Facilitating the purchase, storage and delivery of supplies. *Nation's school*, 4: 79-82, October 1928, 90-94, November, 1928.
This is a series of two articles discussing the reorganizing of the finance and purchasing departments of the Hamtramck, Mich., public schools. Article 1 deals with the techniques of developing a method of tabulation to provide a complete history and inventory of any item. Article 2 concerns transmittal records necessary between the central office and the individual schools.

Laying in the winter's coal supply for the school system. *Nation's schools*, 4: 79-81, August 1929.

The need and advantages of scientific coal purchases, reproducing the contract and specification blanks used by the Hamtramck, Mich., school system as illustrations. This system makes a chemical test to determine the British thermal-unit value, ash content, sulphur content, percentage of volatile matter, moisture, and the percentage of fixed carbon in each purchase of coal.

Why superintendents should plan their buying now. *Nation's schools*, 5: 88-90, April 1930.

An argument for the elimination of procrastination in the matter of buying school supplies for the maintenance and operation, citing the procedure followed in the Hamtramck, Mich., school system as an example. Includes facsimile of an objective maintenance check sheet for a high-school room.

McALLISTER, A. S. Facilitating the purchase of specification made goods. In National association of public school business officials. Proceedings, 1929. p. 95-103.

McCLINTON, J. W. Some uneconomic factors in school buying. *School executives magazine*, 51: 17-18, September 1931.

A brief analysis of some of the more widely used methods in purchasing school supplies and equipment. Several concrete examples illustrate abuse of bidding and sampling.

MULLAN, J. S. School supplies—their purchase and distribution. *American school board journal*, 77: 51, 149-50, July 1928.

Supplies—their purchase and distribution. *American educational digest*, 48: 8-10, September 1928.

NASH, RAYMOND W. Getting full values in school supplies. *American school board journal*, 77: 40, 153, July 1928.

NICHOLAS, P. How Des Moines has simplified specifications for purchase. *American school board journal*, 77: 47-48, December 1928.

Paternalism in the purchase of school supplies and equipment. *American school board journal*, 75: 45-46, November 1927.

PAYNE, A. C. Buying supplies on scientific lines. *School executives magazine*, 51: 16, 33, 34, September 1931.

A description of a practical experiment to determine the relative merits and costs of the folded versus the roll towel.

PEEL, ARTHUR J. Practical suggestions for saving time in requisitioning and

purchasing supplies. *American school board journal*, 75: 49, 145, July 1927.

PULLIAM, ROSCOE. Wanted: some studies of school buying. *American school board journal*, 77: 38, November 1928.

Outlines a need for research into the standard necessities in school supplies, standards for janitor supplies, standards of quality in supplies, standards of quantity, the costs of supply production, and a scientific list of supplies and equipment.

RICH, L. H. The purchase and distribution of equipment and supplies; the practice in Detroit. *American school board journal*, 75: 47-48, August 1927.

SAVAGE, W. J. Cooperative purchasing of school supplies. *Sierra educational news*, 23: 532, November 1927.

SCHAEFFER, J. R. School purchases in Fresno county—Savings reach 50 per cent. *The tax digest*, July 1930, p. 244. *California taxpayers association*, Los Angeles.

Compares unit prices paid for standard school supplies in 1927 with the average for the three following years. The three years of operation of centralized county purchasing resulted in a decrease of 45.56 per cent in the unit cost of supplies. Fresno County has more school districts than any other county in the State (about 175).

School supplies, purchase and distribution. *American school board journal*, 81: 106, July 1930.

School supply purchases in Santa Barbara county; economy of centralized purchasing shown. *The tax digest*, 7: 267-72, August 1929.

SHIPLEY, A. H. A comparison of central purchasing and individual district buying. *American school board journal*, 79: 50, July 1929.

Facts to show how the purchase of school supplies in large quantities and the standardization of supplies result in economy and convenience to a school system.

SPEARS, M. S. Purchasing and distributing supplies and equipment. *Nation's schools*, 2: 62-64, July 1928.

TRETHERWAY, WALTER Y. Centralized school purchasing. *The tax digest*, June 1931, p. 195. *California taxpayers' association*, Los Angeles.

In this article the San Joaquin county purchasing agent tells how county centralized purchasing of standard school supplies sponsored by California taxpayers' association in 1927 is now saving from one-third to one-half on the cost of school supplies in his county. His remarks on organizing for cooperative purchasing are useful.

VINCENT, ARTHUR K. Purchase and use of janitor supplies. M. A. thesis, 1932. *University of Wisconsin, School of education, Madison, Wis.*

VINSON, THOMAS W. Intelligent buying by school boards. *American school board journal*, 66:49, February 1923.

Weak link in school purchasing. *American school board journal*, 77:40, December 1928.

Considers the competitive system as the weakest link in school purchasing. Emphasizes the necessity of adequate specifications and inspection in the purchasing of supplies.

SUPPORT, SCHOOL

Look for this as a subhead under the schools to be supported, e. g., Secondary Education, or Higher Education. See also State Support.

SURVEYS, GENERAL

[The finance sections of most of the surveys up to 1928 are listed in A Topical Analysis of 234 School Surveys published as School of Education, Indiana University, Bloomington, Indiana, bulletin III, no. 4, March, 1927. Accordingly this bibliography lists only surveys beginning with 1928. A similar bulletin for later surveys is under way at the same institution. See the Smith and O'Dell reference in this section]

CARPENTER, W. W. A school-building-survey work sheet. *American school board journal*, 83:57, 108, August 1931.

Sample of a check list and suggested sources of data to be used in school-survey work. Very suggestive and possibly adequate in a general way, but not sufficiently detailed for specific application or for placing in the hands of inexperienced workers.

HOLY, T. C. Making a scientific school-plant survey. *Nation's schools*, 7:21-27, April 1931.

Types of surveys as to the personnel employed are discussed and evaluated. The survey by a staff from the State department of education is favored and the author outlines its operation in the State of Ohio during the past year. The details in collecting, organizing, and interpreting data are explained.

HUGHES, W. HARDIN. The continuous salary survey—An aid to economic adjustment. *Nation's schools*, 7:53-59, May 1931.

Discussion of the techniques for studying salary problems. Treats specifically of the methods used in Pasadena schools.

SMITH, HENRY LESTER and O'DELL, EDGAR ALVIN. Bibliography of school surveys and of references on school surveys. *School of education,*

Indiana university, 1931. (Bulletin, September-November 1931, vol. VIII, nos. 1 and 2, in press, April 1932.)

Lists, 1,733 surveys by States, city, county, State and higher institutions indicating type of contents. Special surveys on "finance" are so listed. Many of the "comprehensive surveys" have chapters on finance. The references on school surveys number 825. Listed by authors and classified under seven useful headings.

School surveys by the division of field studies. *Teachers college record*, 33:116-26, November 1931.

Good brief treatment of effects of school surveys and bibliography of twenty-eight surveys, conducted by the division of field studies of Teachers college, Columbia university, in the past decade.

UNITED STATES. OFFICE OF EDUCATION. Educational surveys. *Washington, U. S. Government printing office*, 1928. 67 p. (U. S. office of education. Bulletin, 1928, no. 11)

Part I Higher educational surveys, 1922-26; Part II City school surveys; Part III Rural education surveys.

TAXATION

See also Revenues

ASSESSMENT

CHAMBER OF COMMERCE OF THE UNITED STATES. TAXATION DIVISION. FINANCE DEPARTMENT. Assessments—efforts of business agencies to promote improved assessment of real estate for local taxation purposes. *Washington, D. C., Chamber of commerce of the United States*, 1930. 35 p. Document, no. 1515 (8).

Discusses organization and personnel, administrative policies, the valuation of land by tax maps and analysis of sales and lease data, the valuation of buildings, re-assessments, review of assessments, equalization of assessments, and office administration as the principal elements of a modern assessing system.

IOWA. KNEPPER, DAVID WILBUR. The municipal assessor; some aspects of municipal finance in Iowa. Doctor's dissertation. *University of Iowa, Iowa City*, 1930. Reprinted from *Municipal government and administration in Iowa*, vol. 1, p. 379-416, 567-76.

NELSON, R. W. and MITCHELL, G. W. Assessment of real estate in Iowa and other mid-western States. *Bureau of business research, University of Iowa, college of commerce, Iowa City, Iowa*, 1931.

MATHEWS, WINIFRED. Relation of taxation to the problems of the teacher. *National league of teachers' associa-*

tions bulletin, 12:21-26, November 1928.

Discusses the forces which worked against legitimate and equitable assessments in Chicago, to show the effect non-assessment has on teachers' salaries. Includes a description of the work of collecting a \$100,000 fund from teachers to procure just reassessments of property.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Assessment of property. In State and local taxation of property. New York, N. Y., National industrial conference board, 1930. p. 50-70. (Studies in taxation and public finance.)

Pages 50-60 outline the methods of State and local tax assessment, with these steps: listing the property, revision of assessments by the local board of review, and equalization by the State tax commission. Assessments as finally adjusted by the State boards usually form the basis for both local and State taxes.

Pages 61-70 are a study of the works of boards of review and equalization on assessments by local, county and State boards. The provisions for review vary considerably from State to State. Equalization usually implies adjustment of relative aggregate valuations between counties and cities by a State equalization board or tax commission. Detailed provisions of various States for assessment, equalization, and review.

— Assessment problems in Illinois, 1913-25. In The fiscal problem in Illinois. New York, N. Y., National industrial conference board, inc., 1927. p. 117-50.

New York State. **BURNSTAN, ARTHUR ROWLAND.** Special assessment procedure; a critical study of the methods and practices in improvement finance in twenty-one New York cities. Doctor's dissertation, Columbia university, 1929. 272 p.

(Also in New York state tax commission special report no. 1.)

OLIVER S. C. Techniques of equalizing assessments for school purposes. Dissertation under way at Teachers college, Columbia university, New York, N. Y.

Author is located at State teachers college, Springfield, Missouri.

POLLOCK, W. W. Scientific approach to real estate valuation. *Annals of American academy of political science*, 148: 97-105, March 1930.

Considers all value relative, and approaches the problem of valuation on a scientific basis, using methods which will accurately measure this relativity. Discusses these methods and their application.

PURDY, LAWSON. The assessment of real estate. New York, N. Y., National Municipal League, 1929. 19 p.

(National Municipal League. Technical pamphlet series, no. 1.)

Discusses the best form for the administration of the assessment of real estate tax maps, field books, land value maps, determination of values, appraisal of buildings and other improvements, and the relation of assessors to the public.

RANKIN, E. R. The classification of property for taxation. *University of North Carolina Press*, 1929. 93 p.

REEVES, CUTHBERT E. The appraisal of urban land and buildings, a working manual for city assessors. New York, N. Y., Municipal administration service, 1931. 169 p. (Municipal administration service. Secondary education. Publication, 1931, no. 11.)

Discusses principles and techniques which will secure more accurate valuation of land.

COLLECTION

Levyng and collecting of school taxes in Philadelphia. *American school board journal*, 78: 68, March 1929.

Minnesota. **ENGELHARDT, F.** Cost of collecting school taxes in Minnesota. Minneapolis, Minn., College of education, University of Minnesota, 1926. 17 p. (University of Minnesota. Bulletin, vol. 29, no. 4. Educational research bulletin, January 1926.)

NOBLE, M. C. S., jr. New problems in public school finance. *American school board journal*, 83: 32, 80, November 1931.

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OVERN, A. V. A determination of the cost of collecting taxes for schools. *American school board journal*, 74: 46-47, 158, 161, March 1927.

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Pennsylvania. **MARSHALL, F. S.** Tax collections in certain districts of Allegheny county, Pa. *Pittsburgh university school education journal*, 4: 75-82, January 1929.

— The cost of school tax collection in Pennsylvania. *School and society*, 23: 775, June 19, 1926.

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sylvania school districts drain needed money from educational activities and that they are incongruous with the large amounts of State aid distributed to those districts.

SPARKS, BOYDEN. Collecting taxes with the obsolete tax machinery in use to-day is like milking cows with a clothes wringer. *Nation's business*, 19: 29-31, 203, February 1930.

An examination of the need of new methods of tax collection, and new sources of revenues, and of the common practices of tax evasion. Points out that an exchange of tax information between States is essential to equitable taxation.

EQUALIZATION

See also Equalization

ALTHAUS, CARL B. Distribution of the tax burden of township and community high schools in Illinois. *Chicago, Ill., Agricultural association*, 1927. 98 p.

CHAMBER OF COMMERCE OF THE U. S. TAXATION DIVISION, FINANCE DEPARTMENT. Greenwich chamber obtains reassessment; tax inequalities eliminated and \$70,500,000 in property added to tax roll. *The public dollar*, 4: 1, 2, April-May 1931.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Chapter XIII. Equalizing the tax burden of education. *University of Nebraska, extension division, Lincoln, Nebr.* 1932. p. 159-162, 200-201. (University of Nebraska publications, monograph no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

HOLY, T. C. Taxpayers' load; is it properly distributed? *Nation's school*, 3: 33-36, April 1929.

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MORT, PAUL R. Tax relief in the financing of public schools. *Teachers college record*, 32: 628-34, April 1931.

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MUSSELMAN, H. T. Calling a halt in the tax exemption craze. *Texas school journal*, 44: 5-6, April 1927.

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taxation. States that it is economically unsound, for those industries which have a sound reason for existence are well able to pay taxes, and those which are too weak to exist should not be encouraged by tax exemptions.

NATIONAL EDUCATION ASSOCIATION, RESEARCH DIVISION. Is the percentage of school money raised in the local community too great in your State? *Washington, National education association*, 1923. p. 273-98. (Research bulletin, vol. 1, no. 4, September, 1923.)

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See also Finance, Public; Revenues, General

BLAKEY, R. G. and BLAKEY, GLADYS C. Digest and index, 1907-1925, National tax association. *New York, N. Y., National tax association*, 1927. 519 p.

BROOKS, E. C. Taxpayer's idea of school business administration. *School executives magazine*, 49: 553-55, August 1930.

CALIFORNIA TAX COMMISSION Final Report of the California Tax Commission 1929. *California State printing office*, 1929. 317 p.

An outstanding example of a description and evaluation of a State tax system on the bases of general considerations and where the taxes should be placed.

CALLAHAN, JOHN. Educational progress and the tax dollar. *Wisconsin journal of education*, 58: 186-87, January 1926.

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Four recommendations of a nation-wide conference on taxation held by business and farm groups and nine methods for improvement in county bond procedures. The Minneapolis City Council examines tax increases and extravagant construction and business men encourage efforts to insure wiser spending. Notes highways and education as the two major causes of high taxes.

Commerce clearing house, inc. *Tax magazine*. 205 W. Monroe Street, Chicago, Illinois, monthly, Vol. 10 for 1932.

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CUBBERLEY, E. P. Funds and taxation. In his State school administration. New York, N. Y., Houghton Mifflin co., 1927. p. 407-30.

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Educational leaders on taxation. *Pittsburgh school bulletin*, 19:205, 207, March 1926.

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FOWLER, JOHN GUY. Measuring present-day taxes by "ability to pay." *Nation's schools*, 7:52-54, February 1931.

This article presents a detailed table of the distribution of the burden of individual income and real estate taxes among 11,640 taxpayers to show to what extent the burden of the income tax has been assumed by those already paying high real estate taxes. The data are offered as an argument for a shifting of the basis of school support from the general property tax to the income tax.

Modernizing programs of school taxation. *Nation's schools*, 7:86, 88, 90, January 1931.

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HAG, ROBERT M. Eight billions of taxes and what becomes of them. *Wor d's work*, 53:498, March 1927.

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The unimportance of taxation in the financing of public education. In *Thirteenth annual schoolmen's week proceedings*, 1926. p. 16-21. University of Pennsylvania, Philadelphia, Pa., 1926.

Discusses the economic strength and vigor of the people, the disposition of the people toward the fruits of education, the manner in which the State is directed and the manner in which educa-

tional functions are distributed, the confidence which the people of the community have in the skill with which the school system is organized, the efficiency with which the Government interprets the desires of the people, and the character of the tax system as factors determining what a State can and will spend for education.

HARDEN, FRANCES E. Taxation for school purposes. *National league of teachers' associations bulletin*, 11:15-16, February 1928.

HIGHLANDS, BERT. The uniform rule in taxation. *Ohio teacher*, 44:451-52, June 1924.

MCCUSTION, FRED. Finance. In Financing schools in the South, 1930. Nashville, Tenn., State directors of educational research for Southern States, 1931. 29 p.

MOBOSCO, D. H. High taxes—your responsibility. *Los Angeles, Calif. California taxpayers' association*, 1931. 6 p.

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MORT, PAUL R. Tax relief in the financing of public schools. *Teachers college record*, 32:628-34, April 1931.

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NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Major issues in school finance. *Washington, National education association*, 1927. (Research bulletin, vol. 5, no. 1, January 1927, pt. 2.) p. 42-51.

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School revenues and new methods of taxation. *Washington, National education association*, 1930. p. 1-10. (Research bulletin, 1930, no. 2.)

Discusses the various types of taxes, the relation of taxation to the public welfare, and what is considered a good tax system. Lists six types of taxes and gives the amount allocated from their proceeds by various States to educational purposes. Includes a table of revenue various forms of taxes would yield by States and an annotated bibliography of 39 references.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Tax burdens and public expenditures. *New York, N. Y., National industrial conference board*, 1925. 70 p.

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RIEDEL, VERNON M. School taxes bulwark the nation. *Mississippi educational advance*, 28: 81, December 1930.

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SELIGMAN, EDWIN R. A. Essays in taxation. Tenth edition, revised. *New York, N. Y., Macmillan co.*, 1925. 806 p.

An authoritative treatment of various special problems revised from the original 1895 and later editions.

SHAW, ALBERT M. Why school taxes are high. *National league of teachers' associations bulletin*, 11: 18-21, November 1927. Also in *Los Angeles school journal*, 10: 38, 44, 46, 48-50, 52, October 1927.

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SMITH, JAMES H. Legal limitations on bonds and taxation for public school buildings. *New York, N. Y., Teachers college, Columbia university*, 1931.

Presents data relating to the various legal limitations in the forty-eight States; also, factors affecting the development of school building programs, the limitations of school indebtedness reduced to a common denominator, and a summary chapter.

Some essentials of a sound tax system. *High school journal*, 14: 87-88, February 1931.

Some thought on taxation and school support. *Educational news*, 4: 6-7, March-April 1929.

SORER, W. W. Legal aspects of the rights and powers of school officials with respect to taxation. *American school board journal*, 79: 43, 104, 107, December 1929.

Defines the most important legal principles of taxation with their application to school revenues and points out the

rights and limits of school officials in matters of taxation. See next item.

— Legal limitations on the rights and powers of school boards with respect to taxation. *New York, N. Y., Teachers college, Columbia university*, 1929. 124 p. (Teachers college, Columbia university. Contributions to education, no. 349.)

Deals with only the legal principles as derived from court. Makes two widely different applications; namely, the erection of danger signals beyond which boards of education and school administrators should not venture, and the construction on improved highways reaching to new points not at present utilized by school authorities, but entirely within their rights and powers.

— What rights and powers have schools for taxation? *American school board journal*, 80: 55-56, May 1930.

Discusses such questions as persons and property exempt from taxation, levy and assessment of school-district taxes, and rights and remedies of taxpayers. See above item.

SWIFT, F. H. and ZIMMERMAN, B. L. State school taxes and school funds and their apportionment. *Washington, U. S. Government printing office*, 1928. (U. S. Office of education. Bulletin, 1928, no. 29.)

The Taxpayer. Monthly magazine, starting in October, 1931. *Middletown, Ohio*.

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TAX RESEARCH FOUNDATION. Federal and State tax systems, edited by Mayne S. Howard. *New York, N. Y., Commerce clearing house of the Corporation Trust Co.*, 1931. 91 p.

Presents accurate and detailed diagrams of the tax systems of the Federal Government, the 48 States, the Territories, and several foreign nations.

THELKE, A. L. Attitude of public toward taxation. *South Dakota education association*, 4: 598, June 1929.

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TRUSLER, H. R. Exemption of school property from taxation. In his *Essentials of school law*. *Milwaukee, Wis., Bruce publishing co.*, 1927. p. 414-38.

Determines the legal provisions for the exemption of school property from taxation. Discusses the legal provisions and decisions involved in the definition of school property, taxation of State schools, exemption of State schools from Federal taxation, general exemptions and municipal taxes, exemptions on acquired property, nature of ownership necessary

for exemption, tuition as a use of property for profit, exemption of trust or endowment funds, taxation of property rented to maintain schools, and the taxation of property used for incidental purposes.

U. S. OFFICE OF EDUCATION. Local taxation in supporting schools. In A manual of educational legislation. Washington, U. S. Government printing office, 1926. p. 40-41. (U. S. Office of education. Bulletin, 1926, no. 22.)

RURAL

See also Rural Support

BLEDSE, J. M. Selection of county superintendents and levy of county school tax. *Texas outlook*, 10:10-12, September 1926.

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HEEB, CLARENCE. The rural tax problem. *Social forces*, 8:109-18, September 1929.

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Sets forth by tables and graphs inequalities in school district tax rates, in educational offerings, and in attendance. Tax rates are 11 times higher in some districts than in others due to unequal distribution of wealth.

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WOOD, RAY C. Taxation and county school support. *American school board journal*, 77:59-60, September 1928.

The ability of communities to support education, the relation of taxes to the wealth of the community, the percentage of total taxes devoted to schools, and the values of education are examined to reveal the relationship between taxation and school.

SCHOOL, STATISTICS

[These for schools will be found in the State and city statistics bulletins of the U. S. Office of Education. See State Statistics; City School Statistics. Many school tax data appear in the research bulletins of the National Education Association and may be located through the index at the end of each volume.]

STATES, INDIVIDUAL

References here given cover general taxation systems. For references on specific taxes in a given state, see Taxes and its sub-heads. See also Revenues, States; Individual; Finance, Public; States

ARKANSAS. ROEX, SAM. A discussion of taxation. *Journal of Arkansas education*, 6:7-8, May 1928.

CALIFORNIA. DORSEY, SUSAN M. (Chairman). Report of California commission for study of educational problems. *Sacramento, Calif., State printing office*, 1931. Vol. 1, p. 172-80; Vol. 2, p. 82-90.

Reveals that in California the State, which taxes corporations, is paying in 1930 a smaller percentage of public school costs than it did 25 years ago, while school districts, which tax general property for their funds, are paying a larger percentage than they did 25 years ago, thus imposing an increased burden on the farmer.

JENSEN, GEORGE C. The California tax system. *Sierra educational news*, 22:450, September 1926.

MACCAUGHY, VAUGHAN. Schools and taxes in California. *School and society*, 19:101-103, January 1924.

- **STAFFELBACH, E. H.** California public school finance. *Sierra educational news*, 26:35, October 1930.
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- **TAX COMMISSION.** Final report of the California Tax Commission 1929. *California State printing office*. 311 p.
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- The California tax plan. *American school board journal*, 73:112, July 1926.
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- **VANDERGRIFT, ROLLAND A.** How California taxpayers' association uses scientific research in budget making. *Tax digest*, 7:7-27, January 1929.
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- **KLEMMEDSON, G. S.** Taxation and public school finance in Colorado. *Fort Collins, Colorado agricultural college*, May 1931. 38 p. (Bulletin no. 376.)
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- **SOWERS, DON C.** The tax problem in Colorado. *Boulder, Colo., University of Colorado, extension division*, December 1928. 104 p.
- Connecticut. **SWIFT, F. H.** State systems of taxation for public schools. III. The Connecticut plan. *American school board journal*, 78:65-66; 150-51, May 1929.
- Delaware. **NATIONAL INDUSTRIAL CONFERENCE BOARD, INC.** The fiscal problem in Delaware. *New York, N. Y., National industrial conference board, inc.*, 1927. Chapter V.
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- Theoretical and statistical description of taxation and revenues in Georgia.
- Idaho. **SNYDER, R. H.** The state-wide tax for Idaho. *Idaho teacher*, 8:154, December 1926.
- Illinois. **CHICAGO PRINCIPALS' CLUB REPORTER.** A program for tax reform; recommended by the Illinois joint tax conference. *Chicago principals' club reporter*, 18:14-16, November 1928.
- **MOORE, R. C.** The tax situation in the city of Chicago. *Illinois teacher*, 16:12-13, November 1927.
- **MORRISON, H. C.** The financing of public schools in the State of Illinois. *New York, N. Y., Macmillan co.*, 1924. p. 60-69. (Educational finance inquiry commission series, Vol. IX.)
- Investigates the amounts of land incomes and reveals that land owners in Illinois are paying from 30 to 80 per cent of their land income for taxes, and makes constructive suggestions for desirable tax reforms.
- **NATIONAL INDUSTRIAL CONFERENCE BOARD, INC.** State and local tax revenue, 1913-26. In The fiscal problem in Illinois. *New York, N. Y., National industrial conference board, inc.*, 1927. p. 82-115.
- **REEVES, FLOYD W.** The political unit of public school finance in Illinois. *New York, N. Y., Macmillan co.*, 1924. 160 p. (Educational finance inquiry commission series, Vol. X.)
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Kansas. ALTHAUS, C. B. Cause for the increase in school taxes in the State of Kansas from 1916 to 1926, inclusive. *Kansas teacher and western school journal*, 28: 34-36, November 1928.

The trend of school taxes in Kansas. *Lawrence, Kans. University of Kansas*, 1930. 35 p. (University of Kansas. Bulletin, vol. 31, no. 7, April 1930.)

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Some valuable material for theory and statutes on tax limitation in other States as well.

WOODRING, HARRY H. and NEWMAN, P. G. The proposed tax limitation amendment. *The Kansas teacher*, 35: p. 9-15, April 1932.

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REBER, H. J. and GRIFFENHAGEN, E. O. The taxation system of Missouri. Report of the State survey commission to the Governor. Nov. 30, 1929. *State of Missouri*. 112 p.

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- New Hampshire. Taxes and taxation in New Hampshire. *Concord, N. H., State board of education*, 1929. 18 p. (New Hampshire. Board of education. Institute circular, no. 140. Series 1929-30.)
- New Jersey. Taxing railroads to support schools. *American school board journal*, 77:92, September 1928.
A brief discussion of the railroad tax in New Jersey, showing the amount of money derived from the State tax on railroads in this State during the period 1907-1928, and the manner of disbursing such funds.
- **Commission to investigate county and municipal taxation and expenditures.** A report on educational services and costs. *Trenton, N. J.*, 1932. p. 154. (Report no. 8 of the legislative commission to the Governor and legislature.)
- New Mexico. **ASPLUND, RUPERT F.** Local expenditure control through uniform budgets and accounts. In the University of New Mexico bulletin—State and local taxation with special reference to New Mexico problems. *Albuquerque, University of New Mexico*, 1932. p. 7-16. (Bulletin, Vol. II, No. 1, Economic series. Whole number 209. February 1, 1932.)
Contains explanation of provisions in the State for financing the schools and shows tax limits for education.
- New York. **KENDRICK, M. S.** The collection of taxes by the State government and the division of these revenues, with emphasis on New York. *Journal of political economy*, February 1931. p. 25-41.
- **MORT, P. R. and others.** State support for public schools in New York State as related to tax relief and educational expansion. *Report of New York State tax commission*, 1931. Memorandum no. 2. 81 p.
- **NATIONAL INDUSTRIAL CONFERENCE BOARD, INC.** The fiscal problem in New York State. Possible sources of additional tax revenue. p. 58-214. *National industrial conference board, inc. New York, N. Y.* 1928.
- Recent school legislation—continuance of effort to equalize support of rural schools and to grant more freedom to cities in taxation. Twenty-fourth annual report of the state department of education. V. 1. *State department of education, Albany, N. Y.*, 1929.
- Some recent and impending legislation with particular reference to laws enlarging units of administration and taxation, and financial relief to cities. Twenty-second annual report of State department of education. *State department of education, Albany, N. Y.*, 1926.
- **STATE TAX COMMISSION.** Federal and State tax systems. *Chicago, Commerce clearing house, inc., Corporation trust co.*, 1932. 145 p.
Reproduces charts as of January 1, 1932 of the Federal tax system, of the systems in each of the 48 States, of local tax systems in this country, and of Canada, Europe, and other countries. Outlines the legal and statistical status of certain tax matters in the various States, telling where and how jurisdictions tax and what revenues the taxes produce. Similar charts have been issued for several years.
- Tax exemptions in the State of New York. Legislative document no. 88. *Albany, N. Y., J. B. Lyon company*, 1927.
- North Carolina. **ALLEN, A. T.** North Carolina's school tax revolution. *School life*, 17:85-86, January 1932.
Issues affecting North Carolina's plan for complete State support for the six month school terms required by State constitution.
- **CARROLL, CHARLES FISHER.** Taxation supplementary to State support of schools in North Carolina since 1868. *Raleigh, N. C., State Department of Education*, 1930.
- **SWIFT, FLETCHER H.** State systems of taxation for public schools. II. The North Carolina plan. *American school board journal*, 78:45-46, April 1929.
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- DAVENPORT, FREDERICK M. Taxation and education in Pennsylvania. *Pennsylvania school journal*, 72: 76-78, 90-91, 141-42, October-November 1923.
- FOX, LEONARD P. Taxation for State purposes in Pennsylvania. *Harrisburg, Pa., State chamber of commerce*, 1925. 155 p.
- MARSHALL, F. S. Objective millage rate for certain third class school districts of Allegheny county, Pa. *Pittsburgh university school educational journal*, 4: 67-69, January 1929.
- SELIGMAN, EDWIN R. A. Uniform taxation. *Pennsylvania school journal*, 72: 409-10, March 1924.
- Outlines the need for income, corporation and business tax to supplement the property tax as a source of school support in Pennsylvania. Justifies this plan for providing increased public revenue on the grounds that the function of government is not only protective and repressive but also creative.
- WEAVER, F. P. The rural tax problem in Pennsylvania. *State college, Pa., Pennsylvania State college school of agriculture and experiment station*, 1931. 35 p. (Bulletin 263, March 1931)
- Shows with tables and graphs pertinent data on farm and urban incomes and the relation these bear to taxation burdens. Farmer's tax was 13.6 per cent of his income while the non-farmer's tax was 9.5 per cent of his income.
- and KING, C. L. Some phases of taxation in Pennsylvania. *Pennsylvania department of agriculture*, 1926. *Harrisburg, Pa.*
- South Carolina. MILLS, W. H. The taxation system of South Carolina. *Clemson college, Clemson college press*, September 1926. 79 p. (Bulletin, no. 231.)
- TAX RESEARCH FOUNDATION (Mayne S. Howard, editor). Federal and State tax systems. *New York, N. Y., Commerce clearing house of the corporation trust co.*, 1931. 91 p.
- Presents accurate and detailed charts of the tax systems of the Federal Government, the 48 States, the Territories, and several foreign nations.
- Texas. WORKS, GEORGE A. Texas educational survey report. Vol. VIII, General report. p. 105-134. *Texas educational survey commission. Austin, Tex.* 1925.
- Determines amount Texas should spend on schools by comparisons with other States, discusses the ad valorem tax, and outlines a program of State aid.
- Utah. CHILD, G. N. The financial support of public schools. *Utah educational review*, 25: 200-201, 235-36, January 1932.
- Analyzes in detail public school finance in Utah. Considers the type of tax, total expenditure for schools as compared to total government costs, and values versus cost.
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- Virginia. NOBLE, M. C. S. Public school finance in Virginia. *Raleigh, N. C., State department of education*, 1931.
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Compares the public school costs of Washington with those of the entire United States, and attempts to show how the tax system of Washington may be improved by modification of general property tax, sales tax, excise and net profits tax, inheritance tax, and income tax.

—RICHARDSON, DR. Tax reform in the State of Washington. *Washington education journal*, 6:101, December 1928.

—Taxation and educational opportunity in the State of Washington. *Washington education journal*, 4:138-39, 151-52, January 1925.

—Tax investigation commission. Report, 1930. p. 31-37. *State Department, Olympia, Wash.*

Discusses the fixation of millage rates and some current higher education tax problems in Washington. Various forms of taxation are appraised in an effort to determine their applicability to the finance problems of the State.

West Virginia. Tax problem in West Virginia. *New York, N. Y., National industrial conference board*, 1925. 235 p.

Wisconsin. BAKER, NEWMAN F. Changes in the Wisconsin tax law. *National tax association*, 1929. p. 131-38. (Bulletin, 1929, no. 14.)

—BLOUGH, JACOB ROY. The geographical problem in Wisconsin taxation. Doctor's dissertation, University of Wisconsin. *Madison, Wis., Tax Commission*. Bulletin no. 39, June 1930.

—CHANDLER, ZACK A. Summary of Wisconsin tax laws. *Chicago principals' club reporter*, 21:6-8, January 1931.

—FOWLKES, J. G. Improving financial support of public schools; modernizing programs of school tax-

ation; measuring present-day taxes by ability to pay. *Nation's schools*, 6:92, December 1930, 7:86, January 1931, 7:52, February 1931.

Includes an evaluation of the model plan of the National tax association, a statement of some fundamental principles of educational taxation, and of the sources of school revenue in Wisconsin, and a recommendation for some needed tax and finance studies. Shows the distribution of the Madison, Wis., tax burden among 11,640 taxpayers.

—NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. The fiscal system of Wisconsin. In *The tax problem in Wisconsin*. *New York, N. Y., National industrial conference board, inc.*, 1924. p. 1-7.

—SWIFT, FLETCHER HARPER. State systems of taxation for public schools. *American school board journal*, 78:61-62, 142, March 1929.

A clear description of Wisconsin's taxation plans for raising school revenue. Includes the various taxes contributing to educational revenue and criticises each.

Wyoming. Pertinent facts about school taxes and costs of schools in Wyoming. *Wyoming educational bulletin*, 6:4, January 1925.

STATISTICS

[Statistics for taxation for all governmental purposes appear regularly in the standard Cost of Government series of the National Industrial Conference Board, the latest being issued in 1931 and covering the latest years feasible for the various items. Amounts, percentages, and per capita or data from which these last two may be calculated appear regularly for Federal, geographical sections, State, local, and individual State taxes. Each volume gives important figures for several previous years. Sources of data indicated. Many tax statistics showing amounts raised by various taxes appear in the research bulletins of the National Education Association. The data may be located through the index at the end of each volume. Sources indicated.]

TAXES

BUSINESS

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Major issues in school finance. *Washington, National education association*, 1927. p. 46-49. (Research bulletin, vol. 5, no. 1, January 1927, pt. 2.)

The section of this study devoted to a proposed business income tax levy recommends a plan based on a prepared model. Gives business incomes and Federal collections of income taxes in various States in 1924. Suggests a State levy of from 2 to 5 per cent on corporation incomes.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Sales taxes and school support. *Washington, D. C., National education association.* (In preparation.)

— School revenues and new methods of taxation. *Washington, National education association, 1930.* p. 7. (Studies in State educational administration, no. 2.)

Discusses the theory, extent, and status of business income taxes in various States. Outlines legal provisions by which education gains partial support from business income tax collections in Arkansas, Massachusetts, Mississippi, North Carolina, and Wisconsin.

— The business income tax and school support. *Washington, National education association.* (In preparation.)

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. State and local taxation of business corporations. *New York, N. Y., National industrial conference board, inc., 1930.* 177 p. (Studies in taxation and public finance.)

Deals with the tax burdens carried by business corporations, including manufacturing, mercantile, commercial, and amusement enterprises. Outlines the present status of taxes on corporations and indicates briefly the historical development and position in State revenue systems. Describes in detail the extent and character of various forms of corporate taxation, including organization and entrance charges, taxes on capital stock, net income, and property and special business and occupation taxes that apply to incorporated concerns. Analyzes the economic effects of the resulting tax burden.

NATIONAL TAX ASSOCIATION. Report of committee on standardization of business taxes. (Annotated draft of model business income tax.) *In National tax association proceedings, 1929.* p. 401-23. *Columbia, S. C.*

An annotated copy of the model personal income tax act prepared in 1921 by a special committee of the National tax association. In legal form ready for enactment with good notes for profitable discussion on many points.

SULLIVAN, RODMAN. The taxation of chain stores. *In Educational conference. Proceedings of the seventh annual conference, 1930. Lexington, Ky., University of Kentucky, 1930.* Vol. III, no. 2. p. 79-100.

A comprehensive review, with many relevant data, of the growth and influence of the chain store in the United States. Cites many State provisions for taxing these establishments and explains the purpose and the results of these various laws.

TOLMAN, WILLIAM A. The gross sales tax in Kentucky. *Tax magazine.*

Vol. X, no. 3, March 1932. p. 89-94, 100-14, to be concluded in April issue.

A comprehensive study of widespread interest, primarily concerned with the Kentucky tax but including a general survey of taxes on sales in the United States and other countries.

WILLIAMS, GEORGE C. Are taxes a menace to our corporations? *Tax magazine, 10:95-97, March 1932.*

Many statistics to support the position that corporations are unfairly taxed as compared with individuals in business and that the corporations can not stand increased taxation.

GASOLINE

CRAWFORD, F. G. Administration of the gasoline tax in the United States. *New York, N. Y., Municipal administration service, 1928.* 28 p. (Municipal administration service, no. 7.)

This pamphlet, with its historical approach, compactly summarizes the existing practices and procedures in the various States in collecting and distributing the gasoline tax, and discusses the constitutional issues involved. Considers the probable future of the tax.

— Administration of the gasoline tax in the United States. *New York, N. Y., Municipal administration service, 1930.* 35 p. (Municipal administration service. Publication, 1930, no. 15.)

Discusses the history of the gasoline tax, the gross gasoline tax yield 1921-29, responsibility of States for collection, exemptions and refunds; distribution of the tax, cities in relation to the tax, and its constitutionality. Includes many relevant data.

MARTIN, JAMES W. Possible attitudes toward the proposal to raise gasoline tax rates. *Texas outlook, 11:12-13, January 1927.*

Estimates the tax burden, and the effects upon education of a State tax on, not only gasoline but all internal combustion fuels and outlines a publicity program to gain public support. Considers the gasoline tax a very plausible source of school revenue, and discusses three attitudes the public may assume toward the adoption of such a tax.

— The administration of gasoline taxes in the United States. *National municipal review, 13:587-600, October 1924.*

SPECIAL JOINT COMMITTEE ON TAXATION AND RETRENCHMENT OF NEW YORK STATE. Gasoline tax widely adopted by States. *National municipal review, 13:207-211, April 1924.*

UNITED STATES. OFFICE OF EDUCATION. New sources of revenue for education. *In Biennial survey of educa-*

tion in the United States 1928-1930. Chapter on School administration and finance, *Washington, U. S. Government printing office*, 1931. p. 41-47. (U. S. Office of education, Bulletin, 1931, no. 20 Vol. I, Chap. I.)

Describes a number of newer forms of taxes in use in the United States for education. Including gasoline, income, and severance taxes.

INCOME

BIGHAM, TRUMAN C. Fiscal aspects of the State income tax since 1918. *American economic review*, 19: 227-45, June 1929.

Considers the efficiency, as a revenue producer, of the State income tax laws in force now and during the period since 1918 in the various States of the United States.

DAVIS, JOHN W. The income vs. property tax as a source of school revenue. *American school board journal*, 77: 39-41, 136, November 1928.

Accepts as principles that every person having taxable ability should pay some sort of tax, that property should be taxed by the jurisdiction in which it is located, and that business carried on for profit should be taxed for the benefits it receives. Discusses a presumptive income tax, the avoidance of double taxation, and exemptions and abatement in an effort to reveal the need of an income tax to support public schools.

EDDIE, L. D., and METZGER, C. R. State income taxation. *Bloomington, Ind., University of Indiana*, 1926. 50 p. (Indiana studies in business research, vol. 1, no. 1, 1926.)

Gives present status in State laws and outlines model personal and corporation tax laws, showing effects of present statutes.

HOWE, HAROLD. State income taxes. Questions and answers. *Kansas State teachers' association. Topeka Kans.* 1932. 11 p.

Popular presentation with special reference to Kansas. Income tax map of United States, by States, on March 1, 1932.

ILLINOIS STATE TEACHERS' ASSOCIATION, DEPARTMENT OF RESEARCH AND STATISTICS. State income taxation, by L. R. Grimm, *Springfield, Ill., Illinois State teachers association*, 1930. 15 p.

Examines the uses and extent of income taxation in various States with special reference to a proposal for its use as a source of school revenue in Illinois.

NATIONAL EDUCATION ASSOCIATION. Business income tax and school support. *Washington, National education association*. (In preparation.)

— **RESEARCH DIVISION.** Income and taxes collected in the States, 1928.

In Investing in public education. Washington, National education association, 1930. p. 187. (Research bulletin, vol. 8, no. 4, September 1930.)

— **Major issues in school finance.** *Washington, National education association*, 1927. p. 46. (Research bulletin, vol. 5, no. 1, January 1927, pt. 2.)

A study of State income taxes discussing tax rates, methods of collection, and allocating a portion of the resulting revenue for educational support. Tabulates for each State statistics of the Federal income tax returns and the possible returns of State income taxes.

— **Studies in State educational administration.** Study no. 8. The personal income tax and school support. *Washington, National education association*, February 1931. 20 p.

History and present status of the personal income tax statistics for 1928 for State income and Federal levies. Gives possibilities of the tax in all States separately, and selected bibliography of 31 entries.

— **School revenues and new methods of taxation.** *Washington, National education association*, 1930. p. 3. (Studies in State educational administration, no. 2.)

Discusses the theory of taxing incomes, and analyzes the administration of income taxes in Arkansas, Delaware, Georgia, Massachusetts, Mississippi, North Carolina, and Wisconsin in relation to the support of education.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Proposals for changes in Federal income tax administration. *New York, N. Y., National industrial conference board, inc.*, 1924.

— **State income taxes.** *New York, N. Y., National industrial conference board, inc.*, 1930. Vol. I, pt. 1, p. 1-121. Vol. II, pt. 1, p. 1-214.

Vol. I presents the historical development of State taxation based on net income, tracing the significant events in the development of the law in each State in considerable detail. Vol. II deals with the subject topically and analytically. Gives a comprehensive account of the important features of State income taxes, and considers such points as legal bases, exemption, characters of the rates imposed, treatment of nonresidents and details of administration.

— **The shifting and effects of the federal corporation income tax.** *New York, N. Y., National industrial conference board, inc.*, 1928. 251 p. (Manufacturing and mercantile corporations, vol. I.)

This first of a series of studies of the shifting and effects of some of the taxes of our Federal and State systems, explains with numerous examples, the in-

vidence and distribution of the burden of the Federal tax on corporation income and its effect on business enterprise in manufacturing and mercantile corporations. According to those responsible for this study the Federal tax on corporations is not shifted by manufacturing and mercantile business except under rare circumstances.

NATIONAL TAX ASSOCIATION. Report of committee on standardization of business taxes. (Annotated draft of model personal income tax.) In *National tax association. Proceedings, 1928. Columbia, S. C., National tax association, 1929.* p. 424-36.

An annotated copy of the model business income tax act, prepared in 1921 by a special committee of the national tax association. In legal form ready for enactment with good notes for profitable discussion on many points.

— Round table discussion of State personal income taxes, by Kimball A. Wand and others. In *National tax association. Proceedings, 1928. Columbia, S. C., National tax association, 1929.* p. 436-77.

Brief summary of situation in the U. S. with description and evaluations by experienced tax commission men of laws in Wisconsin, Massachusetts, North Dakota, and New York.

Ohio. COMMITTEE ON RESEARCH. GOVERNOR'S TAXATION COMMITTEE. Second preliminary report to the Governor's taxation committee. In *A study of personal income taxes of the various States and probable yields of such taxes applied in Ohio. Columbus, Ohio. The committee on research, October 15, 1930.* 68 p.

Once more income taxation and school administration. *American school board journal, 68: 66, February 1924.*

Planning income tax for schools. *Illinois teacher, 17: 118-19, December 1928.*

SWIFT, FLETCHER H. State taxes as sources of public school revenue. 2. The income tax. *Bulletin of the National tax association, 14: 112-16, December 1928.*

Status of the State income tax in 1928 in the 14 States then having it.

— The personal income tax and our public schools. *School and society, 32: 402-404, September 1930.* Also published in *Indiana teacher 75: 8-10, December 1930.*

Advocates the use of the personal income tax as a source of school revenue. Includes a discussion of the income tax provisions in several States. Calls particular attention to the features of the Georgia income tax law.

— The status of the income tax as a source of school revenue. *Amer-*

ican school board journal, 81: 60-61, 125, October 1930.

An arrangement of the general property tax and a picture of the income tax as a source of school revenue. Recommends the income tax as truest index of wealth and fairest and more defensible form of taxation. Lists the States which allocate all or part of income tax proceeds to schools. Points out provisions of the tax in Massachusetts, North Carolina, New York, Tennessee, and Wisconsin.

Wisconsin. BAKER, NEWMAN F. Income tax. In Changes in the Wisconsin income tax law. *National tax association, 1929.* p. 131-38. (Document, no. 14.)

— **NATIONAL INDUSTRIAL CONFERENCE BOARD, INC.** The income tax in Wisconsin. In *The tax problem in Wisconsin. New York, N. Y., National industrial conference board, inc., 1924.* p. 75-127.

INHERITANCE

BOARDMAN, W. WADE. Multiple inheritance taxation and reciprocal legislation. *Wisconsin law review, 5: 238-95, December 1929.*

Discusses the 1929 Wisconsin reciprocal inheritance tax which avoids double taxation by those States reciprocating with Wisconsin. Considers law may stand but thinks it does not give citizens of nonreciprocating States equal privileges with those of reciprocating States.

CHAMBER OF COMMERCE OF THE UNITED STATES. FINANCE DEPARTMENT. State inheritance taxation (A method of simplification) Report of committee on state and local taxation and expenditures. *Washington. Chamber of commerce of the United States, 1930.* 19 p. Document, no. (4)

Provides information regarding the movement to abolish the taxation of the same inheritance by two or more States. Discusses reciprocity as a method of simplifying tax collections and abolishing unjust double taxation. A committee consisting of State and local officials studying taxation and expenditures, presents four recommendations for improvement of inheritance tax provisions.

NATIONAL EDUCATION ASSOCIATION. School revenues and new methods of taxation. *Washington. National education association, 1930.* p. 7. (Studies in State educational administration, no. 2.)

Considers theory, extent, and status of inheritance taxes in various States. Outlines legal provisions by which education gains partial support from inheritance taxes in Kentucky, Michigan, Montana, and Virginia.

SHULTZ, WILLIAM J. The taxation of inheritance. *Boston, Mass., Houghton Mifflin co., 1926.* 379 p. (Hart Shaffner and Marx prize essays.)

Wisconsin. NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Inheritance tax in Wisconsin—comparison with neighboring State. In *The tax problem in Wisconsin*. New York, N. Y., National industrial conference board, inc., 1924. p. 114-27.

LUXURY

California. STAFFELBACH, ELMER H. Tax reform in California; luxury taxes. *Sierra educational news*, 26: 33-36, January 1930.

COOMBS, WHITNEY. Tax on nonessentials. In *State consumption taxes on nonessentials*. National tax association, 1929. p. 138-41. Document, no. 14.

Summarizes State provisions for taxing sales of tobacco products, admissions to prize fights, theater admissions, soft drinks, ice cream and confections, and miscellaneous articles. Presents information concerning the administration of such taxes and use of the proceeds.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Major issues in school finance. *Washington, National education association*, 1929. Table 13. p. 48-49. (Research bulletin, vol. 5, no. 1, January 1927, pt. 2.)

Appraises possibilities of the tobacco tax as a source of revenue. Presents statistics of expenditures for tobacco in the various States during 1924, and indicates the revenue a proposed 5 per cent State tax on the retail sales of this product would yield.

School revenues and new methods of taxation. Washington, D. C., National education association, 1930. p. 4. (Studies in State educational administration, no. 2, January 1930.)

Discusses the theory, extent, and status of luxury taxes in various States. Outlines legal provisions by which education gains partial support from luxury taxes in Alabama, Arkansas, South Dakota, Tennessee, and Louisiana, and from gasoline taxes in Florida, Georgia, and Texas.

TOWER, RALPH B. Notes on the incidence of State tobacco taxes. *Tax magazine*, 10: 87-88, March 1932.

Considers the parts paid by the manufacturer, the wholesaler, the retailer and the consumer, concluding that in the end, the consumer pays the most and the retailer next.

PROPERTY

DAVIS, JOHN W. The income vs. the property tax as a source of school revenue. *American school board journal*, 77: 43-44, 116, 118, December 1928.

Develops the principles that every person having taxable ability should pay

some sort of tax, that property should be taxed by the jurisdiction in which it is located, and that business carried on for profit should be taxed to pay for the benefits it receives. Discusses a presumptive income tax, the avoidance of double taxation, and exemptions and abatement in an effort to reveal the need of an income tax to support public schools.

ELY, R. T. Taxing land values and taxing building values. *Annals of American academy of political science*, 148: 165-69, March 1930.

Shows, by means of concrete illustrations, why it is impossible to lay down one general rule for taxing land values and another rule for taxing building values.

EVANS, C. E. The general property tax. *Texas outlook*, 14: 67-68, January 1930.

LELAND, S. E. Classified property tax in the United States. *New York, N. Y., Houghton Mifflin co.*, 1928. 492 p.

Discusses the history of the movement, gives arguments for and against, describes comprehensive and partial State systems, and concludes that in every case the classified property tax has been a distinct improvement over the old general property tax. Separate applications to land and to intangible property. Bibliography of over a thousand unannotated references.

MORRISON, H. C. School revenue. *Chicago, Ill., University of Chicago press*, 1930. p. 131, 143, 146-47, 242 p.

Defines and evaluates the property tax and analyzes the personal, economic, and social effects of unwise property taxation which tends to force property out of existence as a tax base.

The financing of public schools in the State of Illinois. *New York, N. Y., Macmillan co.*, 1924. p. 60-69. (Educational finance inquiry commission series, vol. IX.)

Investigates the amounts of land incomes and reveals that land owners in Illinois are paying from 30 to 80 per cent of their land income for taxes.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Major issues in school finance. *Washington, National education association*, 1927. p. 43-46. (Research bulletin, vol. 5, no. 1, January 1927, pt. 2.)

A study of the limitations and frailties of a tax on tangible property and the uses of property tax for school support in 20 States. Tabulates statistics of property values and amounts raised by tax on tangible property in 1924 for the various States.

School revenues and new methods of taxation. *Washington, National education association*, 1930.

p. 2. (Studies in State educational administration, no. 2, January 1930.)

Points out the injustices and weaknesses of the general property taxes. Discusses classification of property for taxation, the separation of sources of State and local revenue, and the equalization of assessments, as techniques for making general property taxes more equitable and efficient.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. The present status of property taxation. In State and local taxation of property. *New York, N. Y., National industrial conference board*, 1930, p. 15-49, 71-75, 76-85. (Studies in taxation and public finance.)

Pages 15-49 discuss the property tax provisions of various State tax systems, pages 71-75 describe machinery for collection of taxes, and pages 76-85 review tendencies toward centralization of administrative control of property tax as a device for overcoming unjust inequalities of assessments.

RANKIN, E. R. The classification of property for taxation. *University of North Carolina Press, Chapel Hill, N. C.*, 1929. 93 p.

STOUTEMYER, J. H. General property tax and public school support. *Nation's schools*, 4: 69-73, September 1929.

Points out the inequity of the general property tax, citing land values and total wealth from 1850-1925. Discusses the graduated income, the inheritance, the gasoline, automobile, severance, corporation, and various kinds of sales taxes. Calls attention to the increasing demand for State-aid for public schools.

SWIFT, FLETCHER H. State taxes as sources of public school revenue. Pt. I. The general property tax. *Bulletin of the national tax association*, 14: 69-77, December 1928.

A description with comment on the major State school taxes in 1928, covering all States, with special attention to the general property tax. Finds this tax very bad, tending to pass or to be levied so as to raise a certain sum per pupil and not at a fixed rate.

Virginia. BALLINGER, ROY A. and COOMBS, WHITNEY. Taxes on farm and urban real estate in Virginia. *Blacksburg, Va., Agricultural experiment station*, 1929. 30 p. (Bulletin, 1929, no. 268.)

WATSON, J. P. Soundings in the general property tax. *Columbus, Ohio, Ohio Institute*, 1929. 70 p.

Wisconsin. FALK, PHILIP HADLEY. The general property tax as a means of public school support in thirty-three Wisconsin cities. Master's thesis, 1928. *University of Wisconsin, School of education, Madison, Wis.*

SEVERANCE

California. STAFFELBACH, ELMER H. The severance tax idea applied to California mineral production. *Sierra educational news*, 25: 30-34, September 1929.

HARRIS, T. H. Severance tax and school support. *American school board journal*, 77: 92, September 1928.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Major issues in school finance. *Washington, National education association*, 1927. Table 14. p. 49-50. (Research bulletin, vol. 5, no. 1, January 1927, pt. 2.)

Statistics showing the value of mineral products in the various States in 1924 and the tax yield of a proposed 3 per cent levy on same are tabulated to reveal the untapped sources of school revenue.

School revenues and new methods of taxation. *Washington, National education association*, 1930. p. 6. (Studies in State educational administration, no. 2, January 1930.)

Discusses the theory, extent, and status of severance taxes in force in various States. Outlines legal provisions by which education gains partial support from severance taxes in Alabama, Arkansas, Louisiana, Minnesota, Montana, and Oklahoma.

Ohio. MOODY, ANCIL EARL. The general property tax of Ohio should be supplemented by a severance tax. Ph. D. thesis, 1931. *Ohio State university, Columbus, Ohio*.

SWIFT, FLETCHER HARPER. Severance tax as a source of school revenue in the United States. *School life*, 15: 26-27, October 1929.

Analyzes the severance tax in force in seven States for the production of school revenue. Shows proceeds by States from this source of revenue.

STATE

See also Finance Public; Taxation, General

BRUCE, WILLIAM G. State taxation and school support. *American school board journal*, 69: 39-40, 43-44, November-December 1924.

COMSTOCK, ALZADA P. Taxation in the modern State. *New York, N. Y., Longmans, Green and co.*, 1929. 240 p.

Deals with national fiscal habits of the postwar years by stating and analyzing those postwar tendencies in taxation which show signs of permanence in European countries and the United States.

FERTIG, J. H., GREY, R. S., and GILDEN, B. R. A compilation of laws relating to State taxation and reve-

nue. *Harrisburg, Pa., Commonwealth of Pennsylvania*, 1928. 285 p.

Compiled by the Pennsylvania legislative referee bureau for the Pennsylvania Tax Commission. Annotated and indexed analytically with a table of cases cited and a chronological table of acts. Covers all legislation to 1928.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Essentials of a sound plan of State and local taxation. *Washington, National education association*, 1927. p. 42-51. (Research bulletin, vol. 5, no. 1, January 1927.)

Presents seven general principles of taxation and discusses the revenue raised by various forms of taxation. Notes some frailties of present taxation systems. Considers a desirable combination of tangible property tax, progressive personal income tax, corporation tax, mineral tax, and tobacco tax, and estimates the revenue each tax would yield in the various States.

New Jersey. MORSE, H. N. and ANDERSON, C. D. History of the State railroad tax to reduce local taxation. *In New Jersey federation of district boards, 1907-28. Trenton, N. J., State federation of district boards*, 1928. p. 74-96.

—The State school tax. *In New Jersey State federation of district boards, 1871-1925. Trenton, N. J., State federation of district boards*, 1928. p. 35-73.

New York. KENDRICK, M. S. The collection of taxes by the State government and the division of these revenues, with emphasis on New York. *Journal of political economy*, February 1931. p. 25-41.

SWIFT, F. H. and ZIMMERMAN, B. L. State school taxes and school funds and their apportionment. *Washington, U. S. Government printing office*. 1928. 431 p. (U. S. bureau of education bulletin 1928, no. 29.)

An exhaustive study of the legal and practical provisions and methods for collecting and apportioning school taxes and school funds in each of the 48 States.

U. S. BUREAU OF THE CENSUS. Digest of State laws relating to taxation revenue, 1922. *Washington, U. S. Government printing office*, 1924.

U. S. OFFICE OF EDUCATION. State taxes and appropriations. *In A manual of educational legislation. Washington, U. S. Government printing office*, 1926. p. 36-38. (U. S. Office of education. Bulletin, 1926, no. 22.)

STATISTICS

See Taxation; Statistics

TEACHERS

ASSOCIATIONS

CRAWFORD, A. B. Anchorage, Ky.

Has under way a dissertation, in connection with the University of Kentucky, on finance in State teachers' associations.

GOODRICH, MIRA T. V. Financing State teachers associations. *In National education association. Proceedings, 1925. Washington, National education association*, 1925. Vol. 63. p. 114-16.

A tabular report of the financing of State teachers' associations, covering the ratio of dues paid in various State associations, the percentage of teachers enrolled in such organizations, and the rate of salaries paid to secretaries and officers.

HOSMAN, E. M. Financial management of the association. *In State teachers organizations. Lincoln, Nebr. The Clafin printing company*. 1926. p. 65-77.

Covers all procedures, duties of officers, classifications of receipts and expenditures, and reports.

NATIONAL EDUCATION ASSOCIATION. Budgeting professional dues. *Journal of the National education association*, 17:266, November 1928.

Shows collection of dues involves considerable expense, cites State associations, using a budgeting procedure and reproduces card used in Pennsylvania.

WILLIAMS, R. E. Executive secretary of Kentucky education association.

Has been assigned the chapter on financial service in a projected source book on professional organizations to be published under the auspices of the national association of secretaries of State education associations.

CONTRACTS

ALLEN, IRA M. Compensation. *In The teachers contractual status as revealed by an analysis of American court decisions. New York, N. Y., Teachers college, Columbia university*. 1928. Chapter no. 6. (Teachers college, Columbia university. Contributions to education, no. 304.)

Chapter 7 discusses teaching qualifications essential to receipt of compensation, rights of teachers to compensation under variously disturbed financial conditions, methods for determining rate or amount of compensation, fiscal methods of making payments, and rules governing actions of teachers to recover compensation.

ANDERSON, EARL W. Salary. *In The teachers contract and other legal phases of teacher status. New York, N. Y., Teachers college, Columbia university*, 1927. p. 22-28.

71-73, 117, 121-22. (Teachers college, Columbia university. Contributions to education, no. 246.)

Refers to the items included in teachers' contracts and discusses the legal phases of teacher status with illustrations from various States.

WILKINS, HOWARD E. Statutory provisions concerning teacher's contracts in the forty-eight States. M. A. thesis, 1929. *University of Wisconsin, School of education, Madison, Wis.*

PLACEMENT

ANDERSON, EARL W. and LITCHEN, RUTH E. The status of the State college teacher placement bureau. *School and society*, 27: 728-32, June 1928.

Results from questionnaire to all State higher education institutions. Gives time of directors to placement work, cost per candidate, maintenance costs per registration, cost per student placed and fees charged students, all for 1925-26.

BROGAN, WHIT. Fees for placement service. In *The work of placement offices in teacher training institutions. New York, N. Y. Teachers college, Columbia university*, 1930. p. 50-52. (Teachers college, Columbia university. Contributions to education, no. 434.)

Theory and practice on such fees in 1929 based on questionnaire to State universities, teachers colleges, and major private and endowed universities.

MAXWELL, ELIZABETH. Placement principles and practices in colleges and universities in the United States, 1932. A doctor's dissertation at New York university nearing completion in April 1932.

A very comprehensive study, including such costs as it was possible to secure.

MYERS, A. F. and BEECHEL, EDITH E. Successful placement of teachers. *Educational administration and supervision*, 12: 596-602, December 1926.

Describes a method of rating teachers by a combination of experience and the ratings of superintendents and critic teachers. Defends the Ohio State University policy of placing good teachers in positions which pay well and attempting to keep good teachers from accepting poorly paid positions. Poor teachers are placed in poorly paid positions and an attempt is made to protect superintendents who pay high salaries from securing poor teachers.

SUPPLY AND DEMAND

BOASING, NELSON L. The oversupply of high school teachers. *High school*, 7: 39-46, January 1930.

BUCKINGHAM, B. R. The relation of general to professional education of teachers. In *Department of superintendence of the National education association. Ninth Yearbook, 1931. p. 253-75. Washington, D. C. The Department, 1931.*

A report of the committee on the economic status of the teacher. Discusses the problems of supply and demand, functions of teacher education, and the principles underlying the solution of problems related to the general and professional education of teachers.

CRABTREE, JAMES W. The scarcity of trained teachers. *School and society*, 24: 448-49, October 9, 1926.

Indiana. BADGER, H. G. Teacher unemployment in Indiana. *School life*, 15: 197, June 1930.

McCRODY, JOHN R. Elementary school teacher supply and demand for 1924-25. *School and society*, 20: 222-24, August 16, 1924.

Michigan. BUTLER, L. A. Report of the committee on teacher supply and demand. *Michigan education journal*, 4: 541-43, May 1927.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. Teacher demand and supply. *Washington, National education association, 1931. 100 p. (Research bulletin, vol. 9, no. 5, November 1931.)*

Using data from State education departments, sets forth major State problems in teacher supply and demand and the methods by which these problems are being met in various States. Sets up a technique by which State departments may attempt to coordinate teacher supply with demand.

Ohio. ANDERSON, EARL W. A study in supply and demand. *Educational research bulletin*, 8: 399-403, December 4, 1929.

A comparison of the number of students trained to teach English by the colleges of Ohio in 1927-28 and the number of inexperienced English teachers hired in 1928-29, according to this study, reveals a 40 per cent waste in English teacher training for that year. The extent to which teachers teach subjects in which they had no training and the various combinations of teaching subject assignments are investigated. Gives some salaries of beginning English teachers.

and FOSTER, RICHARD R. Teacher supply and demand in Ohio, 1929-30. p. 2-170. *Ohio State university, Columbus, Ohio. (Bureau of educational research monograph no. 11.)*

Good separate studies well interpreted for elementary teachers and high-school teachers.

PFEIFFER, HERMAN. Some determiners of teacher supply and demand. *Washington education journal*, 9: 202, March 1930.

ULLRICH, FELIX HELMUTH. Combating the problem of too many teachers. *Nation's schools*, 5: 31-36, January 1930.

TENURE

BAKER, R. H. Lack of tenure of office a factor in school expense. *American school board journal*, 72: 48, May 1926.

Discusses the lack of tenure of office as a factor in school expense. The lack of guaranteed tenure does not attract the most efficient administrators and instructors, handicaps the superintendent, and adds nothing to the wealth of the community.

California. SHAMBAUGH, C. G. Teacher turnover in California and its significance. *Nation's schools*, 7: 77-84, January 1931.

CRABBE, A. L. A study in teacher transiency. *Peabody journal of education*, 1: 295-300, May 1924.

ELSHREE, WILLARD S. Salary and current expenses. In his *Teacher turnover in the cities and villages of New York State*. *New York, N. Y., Teachers college, Columbia University*, 1928. p. 44-46, 63-65. (Teachers college, Columbia university. Contributions to education, no. 300.)

Discusses certain factors which tend to produce instability among the teaching group. Among these factors are salary schedules and current expense per pupil.

Minnesota. SEEDER, R. I. Aspects of tenure and turnover among Minnesota teachers. *American school board journal*, 77: 55-56, 112, 114, 117, October 1928.

NATIONAL EDUCATION ASSOCIATION. RESEARCH DIVISION. The problem of teacher tenure. *Washington, National education association*, 1924. 37 p. (Research bulletin, vol. 2, no. 5, November 1924)

Discusses the needs for better salaries, retirement allowances, and tenure. Notes the extent of annual teacher turnover, and studies tenure legislation and provisions.

WILLIAMS, LEWIS WARD. Turnover among secondary teachers in Illinois. *Phi delta kappan*, 14: 37-39, August 1931.

TEACHER TRAINING

COSTS

Connecticut. MEADER, JAMES L. Costs. In *Normal school education in Connecticut*. *New York, N. Y.*,

Teachers college, Columbia university, 1928. p. 87-94. (Teachers college, Columbia university. Contributions to education, no. 307.)

DONOVAN, HERMAN LEE. Computation of teaching loads in teachers colleges. *National education association. Proceedings*, 1930. p. 867-71.

LINDSEY, J. C. Study of per student costs in normals. *South Dakota education association journal*, 4: 397-98, March 1929.

MAGEE, HERMAN J. Unit costs of salaries in teachers colleges and normal schools. *New York, N. Y., Teachers college, Columbia university*, 1931. 107 p. (Teachers college, Columbia university. Contributions to education, no. 489.)

Analyzes the salary expenditures of certain representative normal schools and teachers colleges for 1929. Uses two unit cost bases, per student credit hour and per student clock hours, in determining the relative costs of instructional service for subject departments, various types of curricula, and years (freshman, sophomore, junior, senior and graduate). Produces a more adequate cost accounting procedure than is now found in most teacher training institutions.

New York. COOPER, H. E. Cost of training teachers: A method of determining costs and its application in the State of New York. *Baltimore, Md., Warwick and York*, 1924. 112 p.

ROSENLOF, GEORGE W. Budget. In *Library facilities of teacher training institutions*. *New York, N. Y., Teachers college, Columbia university*, 1929. Chapter VII. (Teachers college, Columbia university. Contributions to education, no. 347.)

U. S. OFFICE OF EDUCATION. Per capita costs in teacher training institutions, 1927-28. *Washington, U. S. Government printing office*, 1929. 6 p. (U. S. Office of education. Statistical circular, 1929, no. 11.)

Per capita costs on the basis of a 36 weeks year for current expense only, for individual teachers colleges and for State normal schools with central tendencies for these two groups. Indicates when an institution includes expenditures for a model school, dormitory or cafeteria, and extension work. (Similar figures for 1925-26 appear in statistical circular, 1927, no. 9.)

West Virginia. CAVINS, L. V. Institutions of higher education. In *Survey of education in West Virginia*. Vol. 4. *Charleston, W. Va., State department of education*, 1929.

WILLIAMS, E. I. F. Relative cost and effectiveness of on-campus and off-campus training schools. *Tiffin, Ohio, Heidelberg university*, 1927.

FEDERAL AID

See Federal Aid and Vocational Education, Federal Aid

FISCAL ADMINISTRATION

AGNEW, W. D. The administration of professional schools for teachers. *Baltimore, Md., Warwick and York, 1924.*

FRASIER, GEORGE W. Experiments in teachers college administration: finance. *Educational administration and supervision, 15:52-57, January 1929.*

The Colorado State teachers college methods of obtaining money, budget making, finance accounting, and financial reporting are outlined by the president of the institution. Lists items falling under the several budget headings and describes nine types of reports.

— and WHITNEY, F. L. Teachers college finance. *Greeley, Colo., Department of publications, 1930. 436 p.*

A systematic treatment of financial problems found in the teachers college field. Includes concrete illustrations of theories and shows how principles of administering finance may be applied in the management of such colleges.

KITTLE, WILLIAM. A revolving fund for free textbooks and free reference books in a normal school. *Madison, Wis., August 1926, 15 p.*

MEADER, J. L. Normal school education in Connecticut. *New York, N. Y., Teachers college, Columbia university, 1928. 96 p.* (Teachers college, Columbia university. Contributions to education, no. 307.)

RUTLEDGE, SAMUEL A. Finance. *In His* The development of guiding principles for the administration of teachers colleges and normal schools and the development of administrative practices consistent with these principles. *New York, N. Y., Teachers college, Columbia university, 1930. p. 33-43.* (Teachers college, Columbia university. Contributions to education, no. 449.)

Shows the principles of general administration, including fiscal administration, applicable to the successful operation of teachers colleges or normal schools and the nature of administrative activities which should be performed.

WELLS, R. T. How shall a scientific and adequate budget for a teachers college be determined and secured in 1950? *National education association. Proceedings, 1929. p. 928-34.*

GENERAL

WHITNEY, F. L. The social and economic background of a teachers college and university students. *Education, 47:449-56, April 1927.*

HIGH SCHOOL

Louisiana. SMITH, JAMES M. The training of high school teachers in Louisiana. *New York, N. Y., Teachers college, Columbia university, 1928. p. IX, 101.*

Minnesota. HUTSON, P. W. The training of high school teachers of Minnesota. *Minneapolis, Minn., University of Minnesota, 1923. Chapter II.* (University of Minnesota. Education monograph, no. 3, December 10, 1923.)

PUBLIC RELATIONS

WHITNEY, FREDERICK L. and FRASIER, GEORGE W. Finance publicity for the teachers college. *Teachers college journal, 1:97-108, March 1930.*

Discusses levels of publicity, the need for publicity, timeliness, continuity, simplicity and inclusiveness as principles of publicity, executive and extra-mural reporting, direct and indirect publicity, and personal and impersonal publicity for teachers colleges.

STATES, INDIVIDUAL

Colorado. STATE TEACHERS COLLEGE. Sources of income for State teachers and State normal schools. *Greeley, Colo., State teachers college, 1929. 68 p.* (Research bulletin, 1929, no. 14.)

Louisiana. STATE DEPARTMENT OF EDUCATION. Survey of Louisiana State normal college, the Louisiana polytechnic institute and the southwestern Louisiana institute. *Baton Rouge, La., State department of education, 1924. 233 p.*

Missouri. Financial support of teachers colleges in Missouri. *In Preliminary report on publicly supported higher education in the State of Missouri. Jefferson City, Mo., 1929.*

Ohio. MYERS ALONZO FRANKLIN. A teacher training program for Ohio. *New York, N. Y., Teachers college, Columbia university, 1927. 144 p.*

Texas. WORKS, G. A. Higher education. *Austin, Tex., Texas educational survey report, 1925, vol. VI.*

Vermont. STEELE, ROBERT McCURDY. A study of teacher-training in Vermont. *New York, N. Y., Teachers college, Columbia university. 111 p.*

STATISTICS

[Finance statistics appear in the bulletins of the United States Office of Education, the latest in print being for 1929-30. Bulletins for the earlier years can be located through the price list of educational publications of the United States office of education or under the head of Teacher training institutions in Carter Alexander's Educational research, third edition, 1931. The statistics include such items as value of property, receipts classified by sources, and expenditures classified by character. Data appear also for States, and for individual institutions. Data on income, attendance, salaries, and legislative budget requests for State institutions are collected by the office of education in even-numbered years and issued shortly thereafter in mimeographed circulars]

SUPPORT

BLACK, R. M. Twenty years of progress in the financial support of normal schools and teachers colleges. *In National education association. Proceedings, 1928.* p. 930-34. Also in American association of teachers colleges. Yearbook, 1928.

Reviews teachers' college costs, incomes, property values, and salaries of teacher training institutions since 1927. Finds constant increase.

HAMILTON, F. R. Fiscal support of State teachers colleges. *New York, N. Y., Teachers college, Columbia university, 1924.* 51 p. (Teachers college, Columbia university. Contributions to education, no. 165.)

Compares per student costs of teachers colleges with those of other institutions of higher learning. Studies the effect of the size of institutions on cost, the effect of fiscal support upon equipment and the relation of budget preparation and appropriation procedure to proper fiscal support. Five recommendations.

MASON, N. M. Liberal support for normal schools urged. *Illinois teacher, 17: 130-31, January 1929.*

Missouri. EVENDEN, E. S. Financial support of teachers colleges in Missouri. Preliminary report on publicly supported higher education in the State of Missouri. *Jefferson City, Mo., Bots-Hugh Stephens Press, 1929.*

WHITNEY, FREDERICK L. The mill tax method of support for State teachers colleges and State normal schools. *Educational administration and supervision, 11: 473-80, October 1925.*

WHITNEY, F. L., and CONDT, P. M. Sources of income for State teachers colleges. *Greeley, Colo., Colorado State teachers college, 1929.* (Colorado State teachers college research bulletin, 1929, no. 14.) 68 p.

TEACHING AIDS

See Supply and Equipment heads

TEACHING LOAD

California. GROVES, J. W. Distribution of the time of high school teachers in California and relationships existing between factors of service and compensation. Doctor's thesis, 1923. *University of California, Berkeley, California.*

Teaching load economies. *In California schools, State department of education. Sacramento, Calif., March 1932. Vol. 3, no. 3. p. 66.*

A HIGH-SCHOOL PRINCIPAL. School costs and the teacher load. *American school board journal, 83: 111-12, September 1931.*

Actual western State case showing need of schoolmen having definite and defensible teacher load standards.

NOBLE, M. C. S. Jr. Teacher load as a basis for distributing State school aid in the United States. *Raleigh, N. C. State Department of education, 1930.*

Portland, Ore. School costs mount. *American educational digest, 48: 169, December 1928.*

Analyzes the cost of reductions of teacher loads in Portland, Ore., and raises questions as to what types of taxation and what groups of people are to pay for these increased school costs.

PROUT, F. J. Economies to be effected by the reorganization of the teaching load in the high school. *In Ohio state educational conference, fourth annual proceedings, 1924. Ohio state university Bulletin, 29: 141-46.*

Using studies revealing the relative efficiency of large high school classes as a basis, this article points out that if the high school classes in Ohio were raised to 30 or 35 with 25 in laboratories, the State would save approximately \$2,000,000 yearly without the loss of any educational efficiency.

TENURE OF TEACHERS

See Teacher Tenure; Teacher Contracts

TERMINAL COSTS

MORRISON, HENRY C. Terminal cost. *In his The management of the school money. Chicago, Ill., University of Chicago press, 1932. p. 446-87.*

A keen, theoretical treatment with practical illustrations of methods of estimating the future costs of present policies and commitments. Considers it "far better to be assured of adequate schools for the next generation than to make such schools impossible by reckless expansions in the present."

TEXTBOOKS

COSTS

California. PERCY, R. D. State publication of textbooks in California. Berkeley, Calif., *California society of secondary education*, 1930. p. 49-79.

Reproduces cost finding report submitted by the State printer in California and discusses valid cost accounting factors of State publications and valid cost comparison. Investigates hidden costs and points out possible savings of a State system of publication.

Florida. TIDWELL, CLYDE J. State control of textbooks. *New York, N. Y., Teachers college, Columbia university*, 1928. (Teachers college, Columbia university. Contributions to education, no. 299.)

Material in various places on State regulations covering prices, costs, and free textbooks, with special reference to Florida.

HAMMOND, HARRY. State printing of textbooks. *Sacramento, Calif., California State printing office*, 1931.

HENRY, N. B. The cost of textbooks. *In National society for the study of education. Thirteenth yearbook. Part II*, 1931. p. 221-34.

Presents data to show the relative growth of textbook expenditures for the past fifteen years, the cost of textbooks in 13 free textbook States, the percentage of annual current expenditures spent for textbooks, the per capita cost of textbooks, and the cost of textbooks for various grades.

HOOD, WILLIAM R. Free textbooks for public school pupils. *Washington, U. S. Government printing office*, 1923. 14 p. (U. S. Office of education. Bulletin, 1923, no. 50.)

HOWARD, GEORGE. Free textbooks in public schools. *Raleigh, N. C.*, 1924. 75 p.

JOHNSON, W. P. Problems affecting the publishing business and the teaching profession. *School executives magazine*, 51: 56-57, October 1931.

A sensible article by a publisher discussing uniformity, samples, mimeographing, budget percentages and economy in seat work materials.

PHILLIPS, FRANK M. Cost of school and college textbooks for 1928. *Kansas teacher*, 31: 20, September 1930.

Wisconsin. HANSEN, WILLIAM C. The cost and administration of school textbooks in Wisconsin. M.S. thesis, 1925. *University of Wisconsin, School of education, Madison, Wis.*

ECONOMIES

California. DAVIS, PERCY R. State publication of textbooks in California. Doctor's thesis, 1930. *University of California, Berkeley, California society for the study of secondary education*, 1930. 91 p.

A consideration of the educational and financial aspects of State publication of basal elementary textbooks in California. Findings: The existence of any financial saving to the State of California resulting from the state publication of textbooks is doubtful; the total cost of textbooks is relatively insignificant; the possibility of comparatively slight financial savings should not be permitted to curtail an ample, regular, and unrestricted supply to the school of the best modern books produced; the policy of state printing operates in this State to curtail such a supply; and for these reasons state publication of textbooks in California can not be defended upon financial or educational grounds.

CUBBERLEY, E. P. The State publication of textbooks. *In National society for the study of education. Thirteenth yearbook. Part II*. p. 237-38.

Reveals that State publication of textbooks can save only a fraction of 1 per cent of the cost of education, and that such a niggardly saving hazards the efficiency of our entire educational program.

EDMONSON, J. B. Abuses in sample textbooks. *American school board journal*, 84: 62. March 1932.

Points out the need and desirability of reducing the loss through wasteful sampling of textbooks. The public pays 3 to 10 per cent of the cost of books for this practice. Some superintendents follow the practice of purchasing all sample copies of textbooks needed.

ELLIS, SAMUEL R. Standards for high school textbooks. Ph. M. thesis, 1925. *University of Wisconsin, Madison, Wis.*

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administrations. Textbooks. *University of Nebraska, extension division. Lincoln, Nebr.* 1932. p. 55-56, 59, 174, 176-77. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in this field and a check list for knowing when such economies are secured.

STALLARD, WILLIAM B. A study of textbook commissions—brief review of methods of adopting textbooks in various States. *Kentucky high school quarterly*, 11: 19-81, October 1925.

WELLS, D. N. How public schools reduced school book costs through a book repair department. *American*

school board journal, 77: 46, July 1928.

The plan for reducing school book costs in Pueblo, Colo. The cost for repair amounted to an average of 26.8 cents as compared with 55 cents for each new book plus freight and drayage.

WHIPPLE, GUY M. The selection of textbooks. *American school board journal*, 80: 51-53, 158, May 1930.

A study of the increasing costs of textbooks previous to 1928. Discusses the selection of textbooks, a criterion to aid in such selection, and the relative merits of uniformity as shown in one State. Recommends printed texts with a more mobile plan of selection.

TOBACCO

See Luxuries; Taxes, Luxuries

TURNOVER

See Teacher Tenure

TRANSPORTATION

ACCOUNTING

CALIFORNIA TAXPAYERS' ASSOCIATION. Report No. 8. Recommended accounting system for school bus transportation. *Los Angeles, California taxpayers' association*, August 1927. 19 pp.

A recommended system of accounting together with sample forms applicable to public school transportation problems.

School bus transportation accounting system. In *The tax digest*, Vol. 5, no. 3, September 1927. *California taxpayers' association*, Los Angeles.

HOWARD, GEORGE. A simple system of cost accounting for school transportation. *American school board journal*, 70: 54, 144, 146, 149, June 1925.

JOHNS, R. L. State and local administration of school transportation. *New York, N. Y., Teachers college, Columbia university*, 1928. p. 104-10. (Teachers college, Columbia university. Contributions to education, no. 330.)

Determines some objectives of cost accounting for pupil transportation and presents suggestive legal and accounting forms and procedures for the administration of such a system.

MAY, I. A. Motor bus accounting practice. *New York, N. Y., Ronald Press company*, 1926.

School bus transportation accounting system. *American educational digest*, 47: 69-70, October 1927.

AID

See State Aid, Transportation

COSTS

See also Transportation Economies

ABEL, J. F. Amounts spent for pupil transportation. In Data on consolidation of schools and transportation. *Washington, U. S. Government printing office*, 1925. p. 10, 11. (U. S. Office of education. Bulletin, 1925, no. 22.)

Average cost of transportation per child per mile per day and for transportation yearly. In A study of 260 school consolidations. *Washington, U. S. Government printing office*, 1924. p. 20-31. (U. S. Office of education. Bulletin, 1924, no. 32.)

ALABAMA EDUCATION ASSOCIATION. Transportation a major problem in Alabama. *Alabama school journal*, 48: 3-5, October 1930.

Detailed data pertaining to pupil transportation costs, types of vehicles used, qualification of drivers, and related information. Tables.

Arkansas. DAWSON, HOWARD A. Transportation of pupils in consolidated schools of Arkansas. *Little Rock, Division of statistics and information, State department of education*. August 1928.

Compares school ownership with private ownership of conveyance as to costs.

BURNS, R. L. Index of cost. In Measurement of the need for transporting pupils. *New York, N. Y., Teachers college, Columbia university*, 1927. 61 p. (Teachers college, Columbia university. Contributions to education, no. 289.)

California. Cost of transporting children to school in Kern county; *The tax digest*, July, 1927, p. 6; *California taxpayers' association*, Los Angeles.

Compares costs between districts, analyzes factors in cost and makes recommendations for betterment of service and elimination of waste.

EVANS, F. O. Cost of transportation in California. *Tax digest*, 7: 346-49, October 1929.

EVANS, F. O. Factors affecting the cost of school transportation in California. *Washington, U. S. Government printing office*, 1930. p. 39-40. (U. S. Office of education. Bulletin, 1930, no. 29.)

Compares cost of school transportation and commercial transportation and develops norms for measuring transpor-

tation costs. Many data and a summary of findings which are in the nature of conclusions and recommendations for accounting and operation of pupil transportation systems.

COPELAND, JOSEPH CALVIN. Costs and measurements applied in school transportation. M. A. thesis, 1931. Ohio State university, Columbus, Ohio.

COVERT, TIMON. Average transportation costs per child per day per mile. In Rural school consolidation. Washington, U. S. Government printing office, 1930. p. 20-34. (U. S. Office of education. Pamphlet, no. 6, 1930.)

Consolidation of schools and transportation of pupils, 1927-28. Washington, U. S. Office of education, Circular no. 3, January 1930. (Multigraphed.) (For similar data for 1925-26 see Rural school circular no. 23.)

Shows numbers of school buildings, 1-room and consolidated schools, teaching positions, pupils transported, numbers of school buses used, and expenditure for transportation by States.

District of Columbia. HOLMES, R. S. Low street car fares for school children of the District of Columbia. *American city*, 4: 98, May 1931.

GREENE, HARRY E. The excessive cost of transportation under the contract system. *American school board journal*, 73: 70, October 1926.

Iowa. KELLOGG, GEORGE H. Tabulation of costs of schools of Story County, Iowa, and Second report on transportation, 1924. 2 p. (Mimeographed.)

A concise presentation of statistics of each school of the county (5 city and town independent, 13 consolidated, and 11 one-room). Median annual per pupil costs in the different types of schools.

JOHNS, R. L. State and local administration of school transportation. New York, N. Y., Teachers college, Columbia university, 1928. p. 25-30. (Teachers college, Columbia university. Contributions to education, no. 330.)

Compares the costs of operating school owned and contracted busses and discusses competitive bidding on contracts, initial costs of busses, costs of operation and depreciation, insurance costs, and the total general costs of transportation in various States.

Kansas. RANICK, C. E. A study of transportation costs in the schools of western Kansas. *Hays, Kans., Kansas State teachers college of Hays*, 1929. 24 p. (Kansas State

teachers college of Hays. Bulletin, vol. 19, no. 6, November 1929.)

Explains the legal phases of the purchase of equipment, notice to bidders, proposals, contract forms, surety bonds, specifications lists of equipment for school shops, and some minimum essentials in relation to the selection and purchase of equipment for trade and industrial courses.

Louisiana. FAULK, J. W. Consolidation of schools and transportation of pupils in La Fayette parish, La. Washington, U. S. Government printing office, 1923. 10 p. (U. S. Bureau of education. Rural school leaflet no. 10.) 5 cents.

A description of the 21 rural schools, only 2 of which are 1-room type. Consolidated schools are organized on the 7-4 basis. Thirty-five school buses are used in transporting 1,400 pupils at a cost of 10 cents per day per child.

MASSACHUSETTS. Report of committee on school transportation. Boston, Mass., Department of education of Massachusetts, 1925-26. (Framingham conference report.)

Transportation problems in Massachusetts. Excerpts from report of a committee of State educators, Chauncey C. Ferguson, chairman. *Journal of rural education*, 5: 23-27, September-October 1925.

Shows that 9 per cent of pupils transported were transported in horse-drawn, while over 50 per cent traveled in motor buses. Cost per mile is about twice as much by horse-drawn as by motor buses.

Minnesota. SELKE, GEORGE A. Transportation costs in Minnesota consolidated schools. Washington, Government printing office, 1924. 7 p. (U. S. Bureau of education. Rural school leaflet no. 29.)

A statistical study of transportation costs in Minnesota. The median number of pupils transported per school is 70. The median cost per pupil per year is \$32.46, per pupil per mile is 4 cents. Total number pupils transported, 27,668.

Nebraska. JOHN M. MATZEN. Transportation of pupils in Nebraska. State department of education. Lincoln, Nebr., 1924. 8 p.

A tabular arrangement of transportation information by districts with a summarization for the State on first page. Of the 98 consolidated schools 34 are in the open country and 60 schools furnish transportation. Transportation cost per pupil per mile is 2 cents.

New Jersey. Cost of transportation in New Jersey. *American school board journal*, 75: 142, September 1927.

DEPARTMENT OF EDUCATION. Cost of transportation in New Jersey. Education bulletin, 13: 349-

53, May 1927. Trenton, Department of education, 1927.

A study of the cost of pupil transportation in New Jersey 1901-1926. Pupils transported: 1901 was 122, cost \$4,420; 1926 was 45,778, cost \$1,545,470.

North Carolina. NOBLE, M. C. S., jr. Transportation study. Raleigh, N. C., State department of education, 1930.

A comprehensive analysis of transportation costs in the public schools of North Carolina. Costs being calculated on basis of separate counties, type of bus, type of road, size of load, type of school, etc. Study to be completed by July 1, 1932.

STATE SUPERINTENDENT OF PUBLIC INSTRUCTION. Cost of transportation. Raleigh, N. C. State school facts, vol. V, no. 15, April 15, 1929. (See also Vol. I, no. 20, July 1, 1925, for 1924-25 statistics.)

This issue is devoted to pupil transportation data for the year 1927-28. Shows a total expenditure of \$1,675,979.41; number trucks used 3,225; number pupils transported 136,980; annual cost per pupil transported \$12.24.

STATE UNIVERSITY. Cost of operating school buses, 1926-27; average annual cost per bus operated. University of North Carolina news letter, 14:1, August 20, 1928.

Cost of transporting rural white pupils: current cost per pupil per mile, 1927-1928. University of North Carolina news letter, 15:1, May 15, 1929.

Ohio. BAER, JOSEPH A. Transportation of pupils in Cuyahoga county, Ohio. Journal of rural education, 5:16-21, September-October 1925. [See also 12-page mimeographed report by same author.]

A detailed description of pupil transportation in this highly centralized county. Includes data in tabular form showing miles of vehicular travel, number of pupils transported, and costs for each of the 28 districts of the county. Cost in cents per pupil per day was 13.7.

Oklahoma. MOTHERSEAD, G. B. Unit costs of transportation in Oklahoma. Master's thesis, 1927. University of Oklahoma, Norman, Okla. 64 p.

Study of costs of transporting children to schools under different methods of administration as exist in Oklahoma, and comparisons with other States. District owned transportation systems are more economical and as efficient as transportation by contract.

Pennsylvania. HALL, WILLIAM F. Rural school consolidation and transportation of pupils in Pennsylvania. State college, Pa., State college publishing co., 1925. (Bulletin.)

South Carolina. Transportation costs study. In State superintendent of education. Sixty-first annual report, 1929. Charleston, S. C., State, 1929. p. 20.

Texas. McCLUNG, J. B. and RASCO, J. S. Transportation costs and problems in Texas rural schools. Austin, Tex., State department of education, 1926. 14 p. tables. (Bulletin no. 205.)

Report of a study based on replies from 164 schools using transportation. Contains tables showing kinds of districts, types and ownership of vehicles, numbers of pupils transported and data relative to costs. Also contains suggested forms for transportation of pupils and contractor's bond.

Utah. DEPARTMENT OF PUBLIC INSTRUCTION. A study of transportation in the schools of Utah. Revised edition. Salt Lake City, Department of public instruction, 1928. 57 p. (See also similar study published 1926.)

A study by a committee composed of 5 school officials in Utah to show how improvements may be made in pupil transportation service. All phases of transportation analyzed. Average yearly cost per pupil (elementary).

Washington. PRESTON, JOSEPHINE COLLISS. Superintendent of public instruction. Summaries by counties of annual reports of transportation. For the school year ending June 30, 1927. Olympia, Wash., State department of education. 8 p.

A statistical presentation showing value of conveyances, salary of bus drivers, and financial statement.

ECONOMIES

California. Transportation economies. In California schools. State department of education. Sacramento, Calif., March 1932. Vol. 3, no. 3, p. 74-75.

EVANS, F. O. Norms for evaluating school transportation expenditures; The tax digest, February, 1930, p. 61; California taxpayers' association, Los Angeles.

Evaluates the factors that enter into the transportation dollar. Valuation tables are included. The wastes due to small schools and the separation of elementary and high school administration are exposed.

HENZLIK, F. E., RICHARDS, W. M., and others. Practical economies in school administration. Transportation. University of Nebraska, extension division, Lincoln, Nebr., 1932. p. 149-150, 199. (University of Nebraska publications, educational monograph no. 3, 1932. 212 p.)

Practical suggestions and citations of authorities on how to secure economies in

this field and a check list for knowing when such economies are secured.

Improving school transportation—how Sandusky county, Ohio, has set higher standards for rural bus transportation. *American school board journal*, 82: 45, May 1931.

JOHNS, R. L. State and local administration of school transportation. *New York, N. Y., Teachers college, Columbia university*, 1928. p. 64-127. (Teachers college, Columbia university. Contributions to education, no. 330.)

Compares the cost of operating school-owned and contracted busses. Discusses competitive bidding, initial cost and cost of operating various types of busses, and total general costs of transportation in various States. Reveals possible economies.

GENERAL

BURNS, ROBERT LEO. The measurement of transportation need. *New York city, Teachers college, Columbia university*, 1928. (Contributions to education no. 289.)

A modern program of State aid based on the principle of equalization of educational opportunity and determined by a mathematical formula. Data used in arriving at the formula were secured in New Jersey, but the technique is applicable to any State.

Bus transportation of pupils. *American school board journal*, 79: 120, November 1929.

JOHNS, ROE L. State and local administration of school transportation. *New York, N. Y., Teachers college, Columbia university*, 1928. (Teachers college, Columbia university. Contributions to education, no. 330.) 134 p.

Examines the legal responsibility of the State and the locality for providing school transportation. Discusses the status and extent of transportation in relation to modern educational requirements, tabulates the costs of various types of transportation, and outlines administrative procedures. Devises a statistical technique to reveal that density of school population is a valid independent variable for the prediction of per pupil costs of transportation.

PUBLIC UTILITIES, FORTNIGHTLY. Who should pay for reduced car fares for school children? *Public utilities fortnightly*, 7: 165-68, February 5, 1931.

LEGAL ASPECT

DREWES, ARNOLD W. The legal status of transportation of school children in forty-eight States. M. A. thesis, 1927. *Ohio State University*.

DUNCAN, NEAL. Contractual relations for the transportation of pupils. *American school board journal*, vol. 79, no. 3, September 1929. p. 43-44ff.

See also vol. 78, no. 3, no. 5, and vol. 79, no. 5, for articles in this series.

Cites typical examples of State supreme court decisions relative to the use of school funds for pupil transportation, thereby showing how this auxiliary service of the consolidated school has developed.

Statutory provisions for school transportation. *American school board journal*, 78: 45-46, 138, March 1929.

Reviews the history and analyzes the status of school transportation in various States. Discusses ways in which transportation is established, manners of conveyance, distances of conveyance, substitution of board and lodging for transportation, methods of financing transportation and the progressive trends of transportation legislation.

JOHNS, R. L. State and local administration of school transportation. *New York, N. Y., Teachers college, Columbia university*, 1928. p. 92-102. (Teachers college, Columbia university. Contributions to education, no. 330.)

Defines the liability of school boards for transportation accidents by an analysis of cases and court decisions. Bibliography of seventy-five cases carried to superior State courts involving torts of school boards or school board members.

KEESECKER, WARD W. Review of educational legislation, 1926-1928. *Washington, U. S. Government printing office*, 1929. (U. S. Office of education, Bulletin, 1929, no. 27.) Advance sheets from the Biennial survey of education in the United States, 1926-1928.

Contains a section on consolidation and transportation. See Bulletin, 1931, no. 20, vol. I, chap. 23, by same author, for similar information for the biennium, 1929-1930.

KELLY, G. H. Constitutional and legal basis of transporting pupils to and from school. *American school board journal*, 75: 64-65, December 1927, and 76: 51-52, February 1928.

State supreme court decisions relative to the constitutionality and legality of pupil transportation at public expense. Primarily a compilation of interpretations of decisions and citations. References given for all cases cited.

LENTZ, A. E. Liability of districts for negligent operation of motor vehicles. *Sierra educational news*, 25: 22-24, October 1929.

Discusses the 1929 civil code of California regarding the responsibility of a school district for accidents to pupils or

property as a result of the negligent operation of its motor vehicles and the provision of the law which allows the school district to carry liability insurance for such accidents.

PUNKE, HAROLD H. The law governing the transportation of pupils to, and from school. *Elementary school journal*, 29:16-26, September 1928.

A study of supreme court rulings in connection with laws governing the transportation of pupils.

TRUSLER, H. R. Essentials of school law. *Milwaukee, Wis. Bruce publishing co.*, 1927. p. 54, 67, 69, 70, 305.

Summarizes school laws and court decisions concerning the legal phases of transporting children to and from school. Discusses such items as free toll for students, special student rates, fraud in getting student rates, and a bus driver's rights to compensation when school is suspended.

STATISTICS

ABEL, J. F. A study of 260 consolidations. *Washington, U. S. Government printing office*, 1924. 39 p. (U. S. Office of education. Bulletin, 1924, no. 32.)

AMERICAN AUTOMOBILE ASSOCIATION. NATIONAL MOTOR BUS DIVISION. Bus facts for 1929. A publication of facts and figures of the motor bus industry as of January 1, 1929. *Washington, D. C. [1929.]* 47 p. tables, diagrams, map.

Contains data on school bus operation by States for the year 1927-28. Compilation by "Bus Transportation" of New York City. Shows numbers of schools, buses, miles of route, children carried and expenditure for 1927-28.

BUS TRANSPORTATION. How about school traffic? *Bus transportation*, vol. 6, no. 2, February 1927. *New York city.*

A statistical study of motor transportation of pupils presented in detail by States. For the United States in 1925-26 there were reported 13,874 schools to which pupils were transported; 32,778 motor buses used; 316,045 miles of route; 875,462 children transported; and \$23,430,195 expended for this service.

California. GEIGER, CHARLES W. Student transportation for union high schools in California. *American school board journal*, 77:45-46, October 1928.

An article dealing with the transportation of high-school pupils in California. Transportation in nine typical union high-school district is described accompanied with relevant data.

COVERT, TIMON. Schools spend \$30,000,000 yearly to transport pupils. *Bus transportation, New York city*, vol. 5, no. 4, April 1928.

An article dealing with problems of pupil transportation. Contains many

relevant data. Each of 10 States spent more than \$1,000,000 for transporting pupils in 1924-25. The total amount reported that year exceeded \$30,000,000. The number of consolidated schools was 15,500.

Consolidation of schools and transportation of pupils, 1927-1928. *U. S. Office of education, Circular no. 3*, January, 1930. (Similar circulars published each preceding two years.) Mimeographed 2 p.

GARRIS, E. W. Transportation of school children. *Columbia, S. C., University of South Carolina*, 1924. 26 p. (University of South Carolina Bulletin, 1924, no. 140.)

Louisiana. FAULK, J. W. Consolidation of schools and transportation of pupils in Lafayette parish, La. *Washington, U. S. Government printing office*, 1923. 10 p. (U. S. Bureau of education. Rural school leaflet no. 19.)

A description of the 21 rural schools, only 2 of which are 1-room type. Consolidated schools are organized on the 7-4 basis. Thirty-five school buses are used in transporting 1,400 pupils at a cost of 10 cents per day per child.

New York. BUTTERWORTH, JULIAN R. Pupil transportation in New York State. *In New York education*, 17: 629-31, May, 1929.

An interpretation of information concerning transportation of pupils in 180 schools of New York State.

UNIVERSITY OF THE STATE OF NEW YORK. Transportation of pupils. Albany, N. Y., *University of the State of New York*, 1930. 13 p. (Bulletin, no. 953. Law pamphlet, no. 8.)

North Carolina. STATE DEPARTMENT OF EDUCATION. Comparison of Transportation Allotments, 1929-30. *Raleigh, N. C., State Department of education*, 1931.

Ohio. BAER, JOSEPH A. Transportation of pupils in Cuyahoga county, Ohio. *Journal of rural education*, 5:16-21, September-October 1925. See also 12-page mimeographed report by same author.

A detailed description of pupil transportation in this highly centralized county. Includes data in tabular form showing: Miles of vehicular travel, number of pupils transported, and costs for each of the 28 districts of the county. Cost in cents per pupil per day was 13.7.

HAETSOOK, MILLARD D. A survey of bus transportation to and from Ohio schools, 1929-30. M. A. thesis, 1930. *Ohio State university.*

Utah. A study of transportation in schools of Utah. State department of education. *Salt Lake City, Utah*, 1928. 57 p.

Washington. JOSEPHINE CORLISS PRESTON. Summaries by counties of annual reports of transportation. For the school year ending June 30, 1927. *State Department of education, Olympia, Wash.* (Mimeographed.) 8 p.

A statistical presentation of data showing the consolidation situation in Washington. Numbers of school districts furnishing transportation, routes and miles traveled; kinds of roads; length of trips in minutes; kinds, ownership, and value of conveyances; number of pupils transported; qualification and salary of bus drivers; and financial statement are among the items included.

Wisconsin. THORP, JOHN HENRY. Transportation of high school pupils in Wisconsin. M. S. thesis, 1931. *University of Wisconsin, School of education, Madison, Wis.*

TUITION

See also Higher Education, Revenues; Higher Education, Student Finance

Authority of the legislature to require school districts to provide instruction for nonresident pupils. *Elementary school journal*, 32:90-93, October 1931.

ENGELHARDT, N. L., and ALEXANDER, CARTER. School finance and business management problems. *New York, Bureau of publications, Teachers college, Columbia university*, 1928. 526 p. (See problem 27, p. 137-45.)

GREENE, CRAWFORD. The payment of tuition in public schools. *American school board journal*, 83:43-45, 116, September 1931.

A bird's-eye view of legal aspects of practical tuition problems with numerous citations of statutes in various States.

HANNA, GEORGE W. The nonresident tuition problem for smaller schools—abstract. In National education association, department of superintendence official report. 1932. *National education association, Washington, D. C.*, February 1932. p. 214-215.

HEGEL, N. H. The administration and collection of nonresident tuition. *American school board journal*, 74:43, April 1927.

A study of the tuition problems of various States showing a need for statutes more clearly defining the residence of children and a uniform procedure involving the transfer of funds to enable

children to attend school where most convenient. An analysis of various tuition case studies is included.

High school tuition outside the home district. *School review*, 35:330-31, May 1927.

HOULE, HAROLD L. A comparative study of the legal aspects of tuition charges in the public schools of U. S. *Iowa City, Iowa, University of Iowa*, 1931. 104 p. (College of education series no. 28, Extension bulletin, no. 263, April 1, 1931.)

HOWE, GEORGE. Collecting tuition from nonresident pupils. *American school board journal*, 77:44, 128, 130, 133, August 1928.

—The problem of tuition charges and collections. *Nation's schools*, 2:44-48, August 1928.

Idaho. The tuition problem. *Idaho journal of education*, 11:103-4, November 1929.

Illinois. TAUBENECK, O. C. Legal opinions of the non-high school district law of Illinois. *Bloomington, Ill., Public school publishing company*, 1931. 84 p.

LIEBLER, C. C. Legal aspects of residence for school purposes. *American school board journal*, 75:45-46, 148, September 1927.

New Jersey. Notice of increase in tuition rates necessary before enrollment of pupils for academic year. *Education bulletin*, 14:61-63, November 1927.

—Per capita high school costs for tuition purposes for the school year 1929-1930. *Education bulletin*, 17:189-211, December 1930.

Similar figures yearly.

New York. COLE, E. E. A word about non-resident tuition. *New York State education*, 14:4-5, September 1926.

—Non-resident academic tuition. *Albany, N. Y., University of the State of New York*, 1927. 6 p. (Bulletin no. 881, August 1, 1927.)

St. Louis rules, new. *American school board journal*, 78:84, February 1929.

STRAYER, G. D., jr. Non-resident tuition study. *Public schools of the District of Columbia*, May 1931.

Variations in city school tuition policies and State regulations of interdistrict tuition payments of 85 cities of various sizes in 32 States. Tabulates and discusses exemptions from payment of tuition, rates of tuition, and methods of computing tuition rates as found in various cities and districts.

SWIFT, F. H. Federal and State policies in public school finance in the United States. *Boston, Ginn and company, 1931.* 472 p.

Contains some scattered material.

Texas. ROGERS, L. W. High school tuition charges. *Texas outlook*, 11: 46-47, November 1927.

— Is high school tuition free? *Texas outlook*, 11: 12-13, March 1927.

— Rural high school tuition. *Texas outlook*, 11: 23, August 1927.

TRUSLER, H. R. Rights, privileges, and responsibilities of students. In his *Essentials of school law. Milwaukee, Wis., Bruce publishing company, 1927.* p. 35-76.

Tuition fees a departure from cherished tradition. *School life*, 12: 110, February 1927.

Tuition fund brings money into treasury. *School topics*, 14: 3, October 9, 1931.

What is an equitable tuition fee? *American school board journal*, 77: 62-63, November 1928.

Wisconsin. HALL, EDWARD D. A study of the tuition situation in Wisconsin high schools. Ph. M. thesis, 1931. *University of Wisconsin, School of education, Madison, Wis.*

VACATION SCHOOL COSTS

See also Summer School Costs

DUGGAN, S. J. The all-year school. *Journal of education*, 106: 214-15, September 1927.

Discusses the all-year school plan as used from 1924-1927, in Nashville, Tenn., and comments on the success of its operation, stating that it will probably become the American system of education.

FARRAND, WILSON and O'SHEA, M. V. All year schools in Newark. *School and society*, 23: 462-69, April 1926.

GEORGE PEABODY COLLEGE FOR TEACHERS. DIVISION OF SURVEYS AND FIELD STUDIES. The all-year schools of Nashville, Tenn. p. 49-53. (Field studies, no. 3, 1931.)

Compares costs of elementary and secondary white and Negro schools when run on part-time and all-year basis. Concludes that the summer quarter of the Nashville schools has effected neither educational nor financial economy.

LANE, ELIAS N. The all-year school—its origin and development. *Nation's schools*, 9: 49-52, March 1932.

Historical résumé, giving reasons for and against the lengthening of the school

term. Short bibliography. Finance part only implied.

New York City. SUPERINTENDENT OF SCHOOLS. Twenty-ninth annual report of the New York City schools. *New York, N. Y., Superintendent of schools, 1927.* p. 211, 655, 665-66, 678, 741-42.

O'SHEA, M. V., and others. All year schools of Newark, N. J. 1926. 98 p. *Board of education, Newark, N. J.*

ROE, WARREN A. All-year schools, a potential progressive educational movement. *Educational method*, 10: 3, October 1930.

Reviews the slow development of the all-year school concept since 1870. Assuming that a given instructional expenditure produces a uniform amount of education, the author asks if society can afford to have its huge investment in school plants lying idle during the summer.

— All-year schools; two views. *Elementary school journal*, 27: 326-29, January 1927.

The negative view declares this type of school inefficient and not economical, while the affirmative attempts to show that the all-year plan, which has been in operation in Newark, New Jersey, since 1912, is entirely satisfactory with increased enrollment, graduates and promotions.

— Comparative costs of integrated all year schooling and of part time schooling. *Educational method*, 10: 350-58, March 1931.

Compares the cost of all year and part time schools by using official statistics. Includes the various types of schools for 1921-25, the per capita costs in 10-month and all-year high schools for 1922-30, and the achievement of pupils in the Newark, N. J., schools. Concludes that all year schooling gives more education, better social service, increased educational opportunity, more economical operation and construction costs, and a lower tax rate.

VANDERSLICE, H. R. The all-year school in Alliquippa, Pa. *Elementary school journal*, 30: 578-85, April 1930.

VALUE OF EDUCATION

See also Economic Phases; Wealth

ADAMS, S. J. Education for a changing world. *Pennsylvania school journal*, 78: 117, October 1929.

ALEXANDER, CARTER. The schools as an investment. *Phi Delta Kappan*, 8: 112-13, December 1930.

This editorial states that the public school is an investment on the part of the public since it is the most effective conserver and developer of our most valuable source of wealth—the brains of the children.

- ANGELL, JAMES R. Contribution of the American college to our national life. *School and society*, 30: 659-68, November 16, 1929.
General review of social, economic and humanitarian effects resulting from the American investment in higher education.
- BECK, F. T. Price of ignorance. *High school teacher*, 5: 263, October 1929.
Analyzes the economic and social values of education. Shows the need for more education in our increasingly complex society and, by an examination of the per capita wealth of various nations at different periods, compares the cost of education with the cost of ignorance.
- BLAIR, F. G. Education in relation to material values. *School and society*, 31: 419-23, March 29, 1930.
A review of Nation-wide surveys and investigations into the mounting costs of the expanding program of public education. Emphasizes services which education renders in creating and maintaining values in real and personal property.
- Boys in industry. *School and society*, 29: 60-61, January 12, 1929.
- BRIGGS, T. H. The great investment—secondary education in a democracy. The Inglis lecture, 1930, Harvard University. *Cambridge, Mass., Harvard University Press*, 1930. 143 p.
This outstanding lecture develops, with special reference to secondary education, the thesis that "the State supports free public schools to perpetuate itself and to promote its own interests. Education, then, is a long-term investment that the State may be a better place in which to live and a better place to make a living."
- CLARK, H. F. Economic effects of education. *Journal of higher education*, 1: 141-48, March 1930.
A general discussion of the economic value of higher education which considers the incomes of the various types of college graduates, the effects of the increasing number of graduates, and the need for vocational surveys and guidance at a college level.
- CROW, WILLIAM L. The value of education to the State. *Wisconsin journal of education*, 55: 254-58, January 1928.
An analytical and philosophical examination of the contributions of education to civilization. Points out that education has created material prosperity and a common morale in thinking and promoted international peace, a modified nationalism, and a refinement of government.
- FOSTER, MERLE A. Education pays the State. *Washington, U. S. Government printing office*, 1925. 27 p. (U. S. Office of education. Bulletin, 1925, no. 33.)
Attempts to prove statistically that properly applied expenditure for education is profitable to the State, since it tends to increase income and wealth, aids in the decrease of illiteracy, and gives the individual better opportunity for self-development and achievement as well as standards of living. Data showing income and expenditures, population and expenditures, and accumulated wealth in relation to expenditures for education permit comparisons between the various States.
- GIFFORD, WALTER S. Does business want scholars? *Harpers magazine*, 156: 609-74, May 1928.
How to strengthen the schools. *Journal of the national education association*, 14: 3, January 1925.
The relation of adequate salaries to an effective teaching force. Estimates annual economic losses due to illiteracy and preventable diseases.
- LEECH, D. R. Scholarship and success in life. *School review*, 38: 222-26, March 1930.
This study concerns the graduates from 1880 to 1920 in a Nebraska town of 1,000 population and indicates a positive correlation between high scholarship and success as measured in terms of occupation and financial reward. High scholarship seems to indicate professional tendencies and power to accumulate wealth.
- LOEB, E. W. Relation of education and income. (A study made by the Alpha Kappa Psi fraternity for the year 1926-27.) *1050 North Delaware street, Indianapolis, Ind. Alpha Kappa Psi Fraternity, Inc.*
- MACCRACKEN, J. H. College and commonwealth. *New York, N. Y., Century co.*, 1929.
- MACLEAY, ELIZABETH L. Paying school bills then and now. *Washington education journal*, 8: 199-200, 214, 220, March 1929.
A comparison of educational progress since 1897 with the rise in educational costs since that time. Attempts to measure costs in terms of products.
- MARION, J. A. The cost of education and its value as a public service. *Western school journal*, 25: 376-77, November 1930.
- MORGAN, JOY ELMER. The cost of schools. *Pennsylvania school journal*, 77: 90, October 1928.
Analyzes the necessity of education to American society as an indication that money so spent is a wise investment. States that schools cost only 5 cents a day per capita.
- Money value of a scientist. *Princeton alumni weekly*, 27: 44-45, October 1, 1926.
- NATIONAL EDUCATION ASSOCIATION. Schools an economic necessity. *Journal of the National education association*, 19: 77, March 1930.
Treats briefly some economic effects of education. That education is conducive to accumulation of wealth by the masses by development of natural resources is

Illustrated by several examples. Evaluates education as a force in modern civilization.

—RESEARCH DIVISION. Major issues in school finance. *Washington, D. C., National education association, 1928*, p. 236-65, (Research bulletin, vol. 4, no. 5, November 1928.)

An inquiry concerning the effect of educational expenditures upon the wealth of the nation. Evaluates education in terms of its costs and its contribution to the economic power of the United States. Attributes a portion of the increase in the nation's savings and capital and of our business expansion to education.

No danger of too many educated men. *School life*, 14:170, May 1929.

REES, ROBERT IRVIN. College men in business. *Association of American colleges bulletin*, 17:112-18, March 1931.

ROSSMAN, JOHN C. Salary schedules and return upon investment. *American school board journal*, 77:37-38, 115, December 1928.

Compares salaries and possible savings of clerical workers and teachers to reveal a 16-year advantage on the part of the clerical worker. Existing teacher salary schedules do not give the teacher an adequate return upon her investment of time and money in a college education.

SCHMIDMAN, J. C. State university add billions to nation's wealth. *Current history*, 26:203-7, May 1927.

School costs and the public. *Journal of the national education association*, 18:135, May 1929.

In reply to the charge that school costs are excessive, this article calls attention to the fact that the people of the United States annually expend three times as much for luxuries and six times as much for automobiles as for schools. States that education is the fundamental investment of our civilization and that to starve education financially is to jeopardize our civilization.

SELKE, G. A. Education as an investment. In *National education association. Proceedings, 1929*. *Washington, D. C., National education association, 1929*. Vol. 67. p. 504-506. (Abstract.)

Reviews some of the economic returns of America's education program. Points out that education is necessary to the maintenance of the present standard of living.

SHANNON, J. R. and FARMER, JAMES C. The correlation of high-school scholastic success with later financial success. *School review*, 39:130-33, February 1931.

From this study involving 66 high-school graduates, the writers conclude that, apparently, scholastic success in high school and financial success later are results of different sets of abilities.

STEWART, P. B. The legal and financial relationships of the results of engineering research to the University. *The association of university and college business officials. Minutes of the eighteenth annual meeting, 1928*, p. 28-42.

The extensive list of noteworthy cooperative achievements between various industries and college and university research departments discussed in this article is indicative of the confidence industry has in the value of education.

STRAYER, GEORGE D. Adequate support of education in the condition of an effective service. *School and society*, 35:373-76, March 19, 1932.

A plea for adequate support of our schools and the improvement of educational services.

TACKETT, R. E. The income tax as an investment. *Journal of Arkansas education*, 9:14-15, 26, October 1930.

An appraisal of the economic returns from investments in education. Asserts that profits from school building activity, raised standards of living, increased agricultural efficiency and production, and stimulated business activity are all effects of education which must be accounted for as dividends from the investment made in education.

UHL, WILLIS L. The increasing costs of secondary education; are they justified? In *Fifteenth annual schoolmen's week proceedings, 1928*, p. 344-47. *University of Pennsylvania, Philadelphia, Pa., 1928*.

An argument to the effect that the increasing costs of secondary education are justified by the results. Explains that the preparation of a greater number for college and the development of skilled tradesmen account for rising secondary school costs. While 1916 to 1926 secondary education costs increased 159 per cent from 1916 to 1926 bank deposits, it points out, increased 293 per cent, electric meters 324 per cent, and telephone connections 157 per cent.

WARREN, JULE B. Dividends on our educational investment. *Raleigh, N. C., State department of education, 1931*.

A study of (1) the relationship between investment in education and growth in wealth of a State, and (2) between per capita investment and school efficiency.

What is a college degree worth? *Peabody journal of education*, 5:310-11, March 1928.

An argument in defense of the A. B. degree, holding that it represents genuine professional training. Argues that the A. B. from a teachers' college is frequently carried into fields of service where distinction is rarely conferred.

When is education too costly? *Nation's schools*, 4:72-73, October 1929.

A short editorial upholding the rising cost of education. Notes the aesthetic and realistic in the schools. Argues that

any system doing a thorough and complete job is cheap, no matter what the price.

FOREIGN

England. HEY, SPURLEY. Value for money in education. *Manchester, England, Thomas Hope, editor publisher, 1925. 32 p.*

A statistical analysis of expenditures for education in England, in an attempt to account for the money value of an education. Discusses the problem under the following headings: Traditional misgivings, the expenditure for which value is demanded, the cost of housing pupils, the cost of mental and physical defectives, medical inspection and treatment, free meals, cost of administration, teachers' salaries, maturity's debt to youth, the cash value of health, the business man's demand, and incalculable returns.

VISUAL EDUCATION
COSTS

See also Social Studies, Costs

ARNOLD, E. J. Wanted, State owned visual aid collections. *Ohio schools, 8:382, November 1930.*

DORRIS, ANNA V. Organization and administration of a visual instruction department. *In Visual instruction in the public schools. New York, N. Y., Ginn and co., 1928. p. 382-400, 427-76.*

Points out the need of visual instruction departments and shows how economy and efficiency would result through centralized effort and intelligent organization. Gives a brief outline of the procedure followed in Berkeley, Calif., in establishing a center on a budget of \$4,500 and a list of rules governing the service and minimum operating equipment needed.

KNOWLTON, D. C. Equipping for visual education. *Junior-senior high school clearing house, 4:198-202, December 1929.*

REITZE, A. W. The organization of a city department of visual aids. *The educational screen, p. 4-6, January 1932.*

Explains how a city can provide a visual education program most economically.

Trade directory for the visual field. *The educational screen, 220, September 1931.*

A list of 51 corporations which supply visual education equipment.

VOCATIONAL EDUCATION

ACCOUNTING

Massachusetts. DEPARTMENT OF EDUCATION. Administrative forms used in the establishment and administra-

tion of State aided vocational and continuation schools including directions for keeping financial accounts for purposes of reimbursement. *Boston, Mass., 1925. 44 p.*

COSTS

ARUNDEL, J. F. A study of unit costs of vocational education in Cincinnati, Ohio. *Federal board for vocational education. Washington, D. C. (In press, 1932.)*

BACKUS, ALLEN D. Maintaining shop equipment. *Industrial education magazine, 29:366-68, April 1928.*

Describes the method used in Newark, N. J., for accounting for and replacing school shop equipment.

FEDERAL BOARD FOR VOCATIONAL EDUCATION. Cost of rehabilitation. p. 28-29 in *A Study of Rehabilitated Persons. Bulletin no. 132, Federal board for vocational education. Washington, D. C., June 1928.*

A few figures on 6,301 cases, about a third of which required only placement. Cost figures included training, training supplies, and artificial appliances but not administration.

HALLER, GEORGE F. Selection and purchase of equipment for trade and industrial classes. *Berkeley, Calif., University of California, 1927. 35 p. (Division of vocational education. Bulletin no. 22. Trade and industrial series no. 7, June 1927.)*

Discusses legal phases of the purchase of industrial school equipment, notices to bidders, forms for proposals, contracts and surety bonds, specifications, lists of equipment for school shops, and some minimum essentials.

MORGAN, BERT E. Cost per unit of teaching high school subjects in Iowa schools offering vocational agriculture. *Masters thesis, 1920. Iowa State college, Iowa City, Iowa. 160 p.*

PROFFITT, MARIS M. Administrative and instruction salaries, with enrollments for October 1930 of vocational high schools, showing per capita costs for these items. *In Survey of the Buffalo public schools. Industrial education section. Washington, U. S. Government printing office, 1931. Tables 20 and 24, p. 23-27. (U. S. Office of education. Pamphlet, no. 17, May 1931.)*

SCHULZ, GEORGE J. Vocational education in the United States. *Washington, U. S. Government printing office, 1931. p. 1-2, 7-10, 15-19. (Seventy-*

first congress. Third session. Document, no. 309.)

An analysis of Federal, State, and local expenditures for various types of vocational education in the United States and a comparison of the effects and values of vocational education with its costs. Includes agricultural education, industrial, and commercial education and the rehabilitation program.

SMITH, K. G. Per capita cost of part-time instruction. *Michigan vocational news-bulletin*, 2: 1, June 1924.

FEDERAL AID

See also Federal Aid; Federal Policies

Appropriation for vocational education in Puerto Rico. *School and society*, 32: 832-33, December 20, 1930.

Federal appropriations for vocational training. *School and society*, 29: 139, February 2, 1929.

A short discussion of the permanent and continuing \$6,000,000 annual appropriation for vocational training under the Smith-Hughes Act of 1928.

FEDERAL BOARD FOR VOCATIONAL EDUCATION. Policies of the Federal board for vocational education. *Washington, U. S. Government printing office*, 1926. p. 5-7, 8-9. (Monograph, no. 2.)

Gives rulings relating to qualifications of teacher trainers and the use of Federal teacher-training funds for qualified local supervisors in agricultural, trade and industrial, and home economics divisions.

INDUSTRIAL ARTS AND VOCATIONAL EDUCATION. Federal aid limited to vocational training. *Industrial arts and vocational education*, 2: 73, February 1931.

Attempts to dispel the confusion found between the general conceptions of vocational training and vocational guidance. Vocational guidance is a function of the general public school and cannot be supported by Federal aid, which is appropriated purely for the support of vocational training.

LEHMAN, CLARENCE O. How the Smith-Hughes Acts affects vocational expenditures. *Nation's school*, 7: 41-43, May 1931.

A statistical presentation showing that in a majority of cases the States have shifted the responsibility that the Government has placed upon them to local communities.

NATIONAL ADVISORY COMMITTEE ON EDUCATION. Federal relations to education. Part I. Committee findings and recommendations. 140 p. Part II. Basic facts. 448 p. 744 Jackson Place, Washington, D. C.

Part I has good but scattered theoretical discussions traceable through the index head of vocational education. Part II has the same, together with valuable recent financial statistics traceable through the same index head.

NICHOLS, FREDERICK. Making federal aid possible in business education. *Journal of business education*, 4: 37-38, 55, April 1930.

Reviews needed reorganization in the field of commercial education and attempts to show that if commercial education is going to train the type of worker needed in modern industry it must be given the Federal aid to which it is entitled as a phase of vocational education.

Proposed appropriation for vocational education. *School and society*, 33: 80, January 17, 1931.

A short comment on a proposition introduced in Congress January, 1931, to appropriate \$10,000,000 to be distributed over a period of four years for the development of vocational education among the States.

SCHULZ, G. J. Vocational education in the United States. *Washington, U. S. Government printing office*, 1931. 30 p. (Document, no. 309.)

An analysis of Federal, State, and local expenditures for various types of vocational education in the United States and a comparison of the effects and values of vocational education with its costs. Includes agricultural education, industrial and trade education, commercial education, and the rehabilitation program.

Texas. DEPARTMENT OF EDUCATION. Vocational education under Smith-Hughes act. *Texas, Department of education*, 1923. 83 p. (Texas department of education. Bulletin, 1923, no. 155.)

GENERAL

See also Agricultural Education; Home Economics; Industrial Education

CHAPMAN, PAUL W. More money for vocational education. *Georgia education journal*, 21: 36, May 1929.

The financial provisions and the probable educational effects of the George-Reed Act and the use of funds in Georgia. Asserts that assistance is given to 50 agricultural departments and 100 home economics departments.

CONWAY, J. Technical education—Is the system wasteful? *Journal of the institution of electrical engineers*, 69: 71-3, December 1930.

FEDERAL BOARD FOR VOCATIONAL EDUCATION. Rooms and equipment for the teaching of vocational agriculture in secondary schools. *Washington, U. S. Government printing office*. (Agricultural series, no. 12.)

HALLER, GEORGE F. Selection and purchase of equipment for trade and industrial classes. *Berkeley, Calif., University of California*, 1927. 35 p. (Division of vocational education.)

Bulletin, no. 22. Trade and Industrial Series, June 1927, no. 7.)

Discusses legal phases of the purchase of industrial-school equipment, notices to bidders, forms for proposals, contracts and surety bonds, specifications, lists of equipment for school shops, and some minimum essentials in relation to the selection and purchase of equipment for trade and industrial courses.

STATISTICS

[The annual reports of the Federal Board of Vocational Education give figures for receipts, expenditures, amounts from Federal, State, and local sources separately and the like for agricultural work, trade and industrial education, home economics, and continuation schools and teacher training that are for vocational work and receive Federal aid. All figures are on a State basis only and of little value except for use with the accompanying enrollment data, to compute per student costs by States. Each report works out the relative amounts from Federal, State, and local sources for the county and by States for the current year, with some figures for previous years]

VOCATIONAL GUIDANCE

COSTS

ALLEN, RICHARD D., *Assistant superintendent of schools, Providence, R. I.*

Has probably the best cost figures on vocational guidance costs. In using such figures, however, care must be exercised to make sure to what extent educational costs are included.

HAYES, MARY H. S. Five year report, 1923-1928. *The vocational service for juniors, 122 East 25th Street, New York City.* 60 p.

Contains some salary and budget figures on the problem of getting the New York City school system to introduce vocational counseling into the junior high schools, the salaries to be supplemented by the outside organization.

GENERAL

New York State. Vocational and educational guidance in junior and senior high schools. Organization and administration. *New York, N. Y., University of the State of New York.* 1927. 29 p. (University of the State of New York. Bulletin, 1927, no. 887.)

Virginia. Inauguration of a vocational and educational guidance program. In Superintendent of public instruction. Fifty-ninth annual report, 1930. *Richmond, Va., State superintendent, 1930.* p. 15.

PLACEMENT

LYNN, EMERSON A. Employment service in the Y. M. C. A. of New York University; A study of its history

and present practices. 1932. *A doctor's dissertation at New York university nearing completion in April 1932.*

Includes cost of placement.

WAGES

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. Wages in the United States, 1914-30. *New York, N. Y., National industrial conference board, inc., 1931.*

A statistical and graphical analysis of the wages paid in manufacturing industries, public utilities, first-class railroads, building trades, and agriculture during the period 1914 to 1930. Notes wage trends and the purchasing power of wages. Sources indicated.

UNITED STATES DEPARTMENT OF COMMERCE—Statistical abstract of the United States. *Washington, U. S. Government printing office, 1931.*

See index, p. 897-98 for references to wages in specific industries. Similar volume yearly.

WASTE

See also Economics; Value of Education

BUCKINGHAM, B. R. The greatest waste in education. *Journal of educational research*, 12: 311-14, November 1925.

Defends the thesis that the greatest waste in education is the traditional repetition of outworn subject matter which has little or no significance to the extemporary purposes of education, and is irrelevant to the needs of modern civilization.

CAST, G. C. Elimination of the unfit; a problem of waste in public education. *School and society*, 18: 84-87, July 21, 1923.

CONWAY, J. Technical education—is the system wasteful? *Journal of the institution of electrical engineers*, 69: 71-3, December 1930.

HYDE, RICHARD E. Waste in professional education. *Journal of educational research*, 18: 144-48, September 1928.

JONES, J. CARTON. An economic waste in education. *School and society*, 27: 678-82, June 9, 1928.

KINNEMAN, JOHN A. The wastefulness of high school education. *Education*, 46: 529-31, May 1926.

Develops the thesis that unless the high school guides the pupil into the vocation for which he is personally suited and in which he is interested, the investment of money and time which society has made in him is ultimately wasted.

PLYE, W. H. Educational waste. *School and society*, 28: 590-91, November 10, 1928.

A discussion of curricular materials stating that in so far as the schools teach artificial materials which have no relation to the life the pupils are going to live, the schools are extravagant. Argues that elementary and high school curricula must be composed of explanations and developments of skills and applications essential to the life of the masses.

Reducing economic waste of poor teaching. *American educational digest*, 44: 11-13, September 1924.

An editorial dealing with the dollar costs of poor English and the more human costs of other social failures. As a means of saving society from these immense human and economic wastes suggests some curriculum reorganizations and a broader and more systematic course of training for teachers.

ROSS, CARMON. Budgeting to prevent waste. In *Fifteenth annual schoolmen's week proceedings*, 1928. p. 236-43. University of Pennsylvania, Philadelphia, Pa., 1928.

SCHUTTE, T. H. Educational waste; a reply. *School and society*, 29: 195-97, February 9, 1929.

SMITH, FRANK WEBSTER. More wastes in education. *School and society*, 28: 81, July 21, 1928.

STIGLER, W. A. Waste in education. *Los Angeles school journal*, 13: 29-31, January 20, 1930.

The wastage in secondary schools. *Scottish educational journal*, 14: 352, March 27, 1931.

Waste in high school education. *School review*, 37: 253, April 1929.

A survey of New York City schools indicating that one out of each five pupils seem unable to benefit from high school training. Estimates the waste of money and of youthful energy accompanying this condition.

WATSON, E. R. S. Two sources of waste in the teaching of French. *Schooling*, 11: 74-96, June 1928.

WECK, FREDERICK W. The elimination of waste in education. *Chicago schools journal*, 7: 126-31, December 1924. 7: 177-81, January 1925.

WORCESTER, D. A. A source of waste in the professional training of teachers. *Journal of educational research*, 17: 117-24, February 1928.

A summarization of the results of an extensive investigation of teachers college courses of study. Finds an excessive amount of repetition and a surprisingly large number of duplications. Recommends that courses be organized with greater individuality in order to conserve the energy of college and student.

WEALTH

ABILITY TO SUPPORT SCHOOLS

Arkansas. U. S. OFFICE OF EDUCATION. Ability to support education in Arkansas. In *Survey of State-supported institutions of higher learning in Arkansas*. Washington, U. S. Government printing office, 1931. Chapter 6, p. 79-85. (U. S. Office of education. Bulletin, 1931, no. 6.)

Economic resources and school costs: 1926. *Virginia teacher*, 9: 154-55, May 1928.

Missouri. ALEXANDER, CARTER. Missouri's ability and effort to support schools. In *Preliminary report of survey of public schools of Missouri*. Jefferson City, Mo., Botz-Hugh Stephens press, 1929. p. 91-106.

NORTON, JOHN K. The ability of the States to support education. Research bulletin, *National education association*, vol. 4, nos. 1 and 2. January-March 1926. 85 p.

Valuable pioneer study comparing the States on economic resources in 1922 using wealth and income as measures. Computes the educational load in each State and relates this to the State's ability to support schools. Discusses accompaniments of differences in ability and unmeasured factors affecting it. Bibliography of 73 annotated references.

Pennsylvania. NORTON, JOHN K. Can Pennsylvania afford first-rate schools? *Pennsylvania school journal*, 76: 263-67, 270, January 1928.

Washington's status: in school support and economic ability. *Washington education journal*, 9: 21, September 1929.

Wisconsin. NORTON, JOHN K. Wisconsin's ability to support education. *Wisconsin journal of education*, 59: 116-17, November 1926.

STATISTICS

[These are to be found in the volumes on Wealth, Debt, and Taxation issued by the United States Bureau of the Census, Department of Commerce. Volumes so far for 1880, 1890, 1904, 1912, and 1922 with one for 1932 scheduled for issue in 1934. Data include assessed and estimated values of different kinds of property and products classified by States and geographically. Usually data on tax and revenue systems of State and local governments, and rates of tax levies. Valuable wealth data appear from time to time also in the research bulletins of the National Education Association, traceable through the index at the end of each volume. Sources indicated.]

REEDER, WARD G. Trends of State and national expenditures for education in terms of wealth. *American school board journal*, 73: 43-45, August, 1926.