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COST RECORDS AND REPORTS
FOR PUBLIC SCHOOLS

by

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THE DEVISING OF A SYSTEM OF RECORDS AND
REPORTS THAT WILL ENABLE SUPERINTENDENTS TO ESTIMATE
THE COST OF EDUCATION AND TO DETERMINE THE EFFICIENCY
OF MISSOURI CITY SCHOOL SYSTEMS

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COST RECORDS AND REPORTS FOR PUBLIC SCHOOLS.

Introduction.

What is the efficiency of the school system? This is the first question asked when a consideration of the money spent in the past, or what should be spent in the future, on that particular system, is taken up.

To determine this, two things must be done. First; the amount of money spent for various items in that system must be compared with amounts for similar items spent in other systems which are under more or less the same conditions. Second: the expense of the different parts of the same system must be compared with each other.

Up to the present time, in Missouri, there has been no standard for measuring the efficiency of schools, so far as the amount of money spent on them was concerned. This^{is} mainly due to the lack of suitable methods for recording and reporting financial data of schools, without which, comparison is impossible.

The aim of this paper then, is to show the purposes and needs of school financial records and reports, to point out where present reports fail, and to devise a system of records and reports that will enable Superintendents of Missouri Schools to determine the efficiency of their schools, using the cost of the same as a basis for their determinations. The idea will be to outline in what respects city school expenses should be compared with each other and to arrange for

every item of expense so it can be put under a definite head, leaving very little of the yearly expense under the meaningless title, "Miscellaneous".

At the same time that a system for recording school expenses is worked out, a method will be devised for best making known these facts to the patrons and supporters of the schools.

In order to ascertain whether such a set of records and reports is applicable to Missouri Schools, the financial data from a representative school of the State will be arranged under the heads suggested, special pains being taken to see that provision has been made for all items of expense that occur in that system, and that no unnecessary division has been put in.

The three fold plan then is, (1) to devise a set of blanks for recording statistics concerning the cost of public schools, (2) to arrange for presenting these facts to the public, and (3) to test the applicability of the blanks for use in Missouri Schools.

Chapter I

Attempts at Uniformity in School Financial Records and Reports.

For many years attempts have been made to get a system of recording and reporting items of school expense which could be used by schools all over the United States. From time to time the annual published reports of some cities have set forth fairly well the divisions of their particular schools into which the tax-payer's money went, but no two cities would place the same items under the same division of expenses. It was impossible to compare the management of one with the other. Each Superintendent, as he was the one who prepared the reports, had his own ideas concerning the arrangement of the different items of expense and hence there were almost as many different ways of recording some items as there were superintendents recording.

There was no successful attempt in standardizing these reports and stating clearly in just what way and under what head the different items of expense should be placed.

At meetings of the National Educational Association eminent educators from all parts of the country have deplored the fact that school reports fail to throw much light upon the financial side of the management of schools and that the reports are unlike in so many ways as to be almost valueless in comparing the efficiency of one system with another, so far as re-

spective costs are concerned.

As early as 1860 and every two or three years after that, until 1890, committees were appointed by the National Educational Association to investigate and submit a plan of uniformity for recording and reporting school expenses. These committees often failed to prepare a report at all and, even when they did do so no use was made of their efforts; after the reports were read before the Association nothing was heard from them till the next meeting.

In 1891 there appeared the first valuable article on school statistics. It was prepared by Dr. Harris, then, United States Commissioner of Education. At intervals for the next eight or nine years he made reports before the Association on different phases of educational statistics; but neither their value, nor that of the suggestions of many others, was realized or at least put to practical use. At the meeting of the Association in 1905 there was a strenuous complaint made of the great divergence in the methods by which different schools reported their items of expense.

In the last five or six years more concerted efforts have been put forth by the Committees of the Association. At the meeting held in San Francisco in 1911, working together with the United States Bureau of Education, they presented a preliminary report on Uniform Records and Reports. This was received in final form at the meeting of the Department of Superintendence held at St. Louis in

February, 1912. The report takes up all phases of school statistics, including methods for State School Systems, City Systems, Special Reports with reference to the individual child, and arrangement of Financial Items.

When all administrators recognize the value of a standard form for school reports, similar to the one of this committee, and make use of it in their statistical work, it will be a simple matter to tell just where any school stands in its efficiency, by referring to all schools under similar conditions.

Chapter II

The Purposes and Needs of Financial Records and Reports

In comparing the businesslike methods of industrial institutions with those of education, the latter are found much inferior. This has always been the state of affairs, however much school men have disliked to admit it.

The annual reports of any of the large railroad systems show that those in charge of the administration know the average cost of hauling a ton of freight per mile, and just how much of their operating expenses is due to carrying a passenger each mile. This knowledge is possible only because a careful and comparative account has been kept of all the expenses in each division of the system.

Any book on factory accounting will show that a system of great exactness, for recording every possible item of expense on an article produced, has been worked out. The superintendent of a shoe factory can tell not only the exact cost of each pair of shoes put out by his factory, but he can apportion this total cost among the numerous and varied processes through which the raw material--the leather--has gone before it is turned into the finished product--the shoe.

The manager of a factory putting out harvesters has the total cost of each harvester allocated to raw

material, labor and machine cost including rent, fuel, light, interest, insurance, depreciation, repairs and taxes. He can tell immediately whether it will be profitable to put in more machines, add more men to his payroll or buy a larger amount of raw material for his present force of men and machines. He not only watches his own plant but that of his competitor across the street. This man may, by the use of a machine just on the market, be able to sell a harvester several dollars cheaper. In order for the first man to keep his trade he must either cut his profits by lowering the price of the harvester as now made, or install the new machines so that he can make it as cheaply as his competitor.

Consequently the men in charge of factories of all kinds keep the closest record possible on the expense of each product and compare continually their plant, as far as is possible, with others that manufacture similar articles. This has been made possible only by elaborate and extensive sets of records applicable to cost accounting.

All this care has been taken to determine the exact cost of articles made for the use of those who have been taught in the schools how to derive the greatest good from the many things at their disposal. Practically no attempt has been made to keep track of the cost of educating each individual and indeed very few superintendents of schools know how much has been spent or is necessary, to take the raw material--a child at six--and turn out a so-called

finished product--the child when he leaves school.

By referring here to the business methods in industries it is not meant to bring education down to such a low level that the cost of educating one child must be kept the same as that of another. Nor does the writer advocate a wholesale adoption by superintendents, of methods such as the superintendent of a shoe factory would use in keeping the cost of one pair of shoes the same for all pairs in that grade. Each pair of shoes starts with the same raw material, goes through exactly the same processes and, on the market brings the same price. Each child in the school is different from the others when he enters, must be handled differently, and when he leaves there is even a more striking dissimilarity. But in certain respects the painstaking and careful methods which are used by manufactures in determining the cost of their products through the various stages, might well be applied to the cost of the public school in its many different branches.

The very men who are so watchful of the exact costs of manufactured products have no attention to give to the cost of educating each child in their city. They have failed to realize that taxes paid for schools were just as much or really more of an investment, as the money they have in their plants. The latter is an investment where the return will be in dollars and cents, the former in educated children.

Professor Snedden says, " Hence we may safely say that the primary standard for school reports should be effective publicity, remembering that such publicity will

in the long run, also very greatly contribute means and incentives to administrative success." ¹ Again he says " It (speaking of the school report) is designed to inform the more intelligent and interested portion of the public as to the status of the schools and to command hearing and support for the progressive policies of the schools." ¹

As long as the schools ran from year to year on practically the same amount of money, it was not necessary to make a special appeal to the public for increasing the rate of taxation of school funds. But, when new courses which required special equipment were introduced into the curriculum, when new ideas in running the schools, which meant an increase in the cost, and an increase in the salaries of teachers became necessary, in order to keep up the standard of the school, the Board had to ask the public for more money.

Before very much cooperation can be expected from the public, in the way of increasing taxes, they must be interested in the school and its work and led to see that more money spent will give a more efficient school and provide a better opportunity for their children to receive an education.

When the request for more money is made, if the records are right at hand to show where it is needed, it will be far easier to get the public to increase the taxes, than to have only verbal statements from the Superintendent and Board that such needs exist. Those who are interested in the

schools will look over the published report and, if certain phases of the work, which they consider very important, have been neglected on account of a lack of funds, will at once make it their business to see that more money is provided. If the Superintendent has called attention, in his report, to the fact that their school is below the majority in the amount of the money spent, personal pride will act as an incentive for providing more funds.

The importance of arousing the interest of the public in schools led to the appointment of a committee on school revenue, in 1910, by the Department of School Patrons , connected with the National Educational Association. The report of this Committee brought out the fact that greater demands are being made on the teachers by the new subjects in the curriculum and, in order to be prepared for these demands, special training which represents a large investment on the part of the teacher must be made. If the teacher has spent more money in order to be better prepared to instruct the children of the community, the community should realize that the teachers ought to be paid higher salaries.

In Illinois, where the efforts of this Committee were largely directed, the amount appropriated by the Legislature for the schools was doubled within a year after the appointment of the Committee.¹

The Superintendent of a school is held responsible for the efficiency of the work done and it is he who must plan and carry into effect the policies of the school.

1. "Report of School Revenue Committee." N.E.A. Proc. 1911, p. 1096.

At least once a year he must take stock of the work done and see in what ways progress has been made, and where greater stress will have to be laid the next year to standardize any part of the system which may be weak. The result of this review usually takes the form of a published report which sets forth the condition of the school.

Until recent years not much pains has been taken in preparing these reports, in the majority of cases. As the public grows more and more interested in the schools they look more to the annual report to determine what the schools are doing and the judgement of a great many people, concerning the capability of the Superintendent is based on this publication. Here is found one cause for the improvement of reports.

Superintendents in trying to better their reports have found that any reform begins with records and very little change can be made until they raise their standard of recording work already done. Dr. W. H. Allen, in speaking of the improvement in school reports says, "A poorly organized, unclassified annual report, that fails to make comparisons, of different schools in the same system with each other, the work of one year with the previous, promises with actual accomplishments, and makes very little use of percentages and tables of summary, indicates as a rule a very lax system of recording and one that is not useful in aiding administration."¹

No more than the Superintendent of a large factory

1. "Demand for Better School Reports." R. Of Rs. Vol. 33. p. 576.

could tell where to make changes in his plant, in order to increase its efficiency, without a complete record of every division of the plant, can a Superintendent of a school system raise the standard of his work unless he has a record of just what has already been done in each department. With this record before him he can begin to make plans for the next years' work.

It is necessary that the Superintendent make two sets of comparisons; different parts of his own system must be compared and then the entire school, with schools in other places. The first comparison is to determine the relative strength of the different parts of the school and the proportionate amount of time and money spent on each one of these. If the Superintendent finds that one school in his system is receiving more money than other, although both are doing exactly the same kind and amount of work, it indicates that a more equal division of the money ought to be made. The need of some part of the school has probably not been apparent on the surface, but in examining the records and looking closer into the matter the Superintendent finds a bad condition existing and should seek to remedy it immediately.

After he has thoroughly gone over all parts of his own system he should then compare his school in entirety with schools in other places that are under somewhat similar conditions. Unless this is done, the Superintendent will have no idea what rank his school occupies in the list of those over the State. In aiding to direct the policies of the school, then, records are necessary.

The two great purposes of financial school records and reports are, first: to show the public where and in what ways the money of the community has been invested in the schools and to arouse their interest in school work, thereby leading to a greater support of the schools, second: to furnish a means for the Superintendent to compare one part of his school system with the others as regards cost, and to compare the whole system with other systems in order to determine the rank and efficiency of his system.

Dr. W. H. Allen in writing on school records and reports, says, " I have ^{come} _^ to believe that there is probably no need today in the Educational world so pressing as that for adequate recording and reporting matters of school interest."¹ This same view is rapidly becoming one of the chief topics of discussion in all educational meetings and, combined with the demand from the public to know more concerning the schools, may bring about a condition where something like as an elaborate system of cost accounting will be in vogue in the schools as is in the modern factory of today.

1 "School Reports as They Are." Educ. Re. Vol.37,p.110.

Chapter 111
The Nature of Financial Reports
Now Existent.

The published report of the Board is the only channel through which it is possible to compare the costs of different schools. These reports, since it is only by means of these that the public at large can become acquainted with the cost of the various parts of the schools, should contain statements of the expenses in such a manner that their meaning can readily be ascertained.

An examination of a number of these reports including those of Hannibal, Cape Girardeau, Poplar Bluff, Jackson, Sikeston, Marshall and Sedalia shows, that even they do not afford a satisfactory means of determining the relative position of the several schools, based on items of expense. These reports fail to furnish satisfactory material for comparison for two reasons. First: the terminology used is different in the several reports and second: the really important and striking data are not given at all. Dr. Elizabeth Adams, in examining seventy two city school reports, found that not a single item appeared under the same head in all the reports.¹

Local conditions will cause a slight variation in the expense of any public school system, but in general the ratio between the different items should be about the same and the best way of estimating proper expendi-

¹"School Reports as They Are."Educ.Re. Vol.37, p.117.

tures should be afforded by a study of the expenses of other schools as given in their reports. The reports as made at present are of little value in this respect.

In many of the reports examined items given in one were entirely omitted from others; often the same heading was given but as different constructions were put on the meaning of the groups, numerous and varied items were classed under each one. Where the cost of education per child is figured, different items are put in the total cost of education, which forms the dividend; some including only the salaries of teachers and general upkeep of buildings and maintenance, while others added the cost of new buildings and some interest on borrowed money. The divisor was sometimes the number enrolled, the average daily attendance or, as in some, a figure which did not correspond to either of these. Such wide variations in terminology, as these, make a comparative study of the reports impossible.

As regards the second failure of the ordinary school reports, very meagre and scattering data have been furnished on the financial side of the administrative problems. Superintendent Elson points out," that there is not only need of reform in how items now finding place in school reports should be kept, but it is becoming imperative that new items of expense be kept."¹

¹"School Records-Their Defects and Improvement."Educ.Re.Vol.39, p.221.

In some of the cities--St. Louis, Cleveland, Detroit and Chicago--additional items have been put in to cover the increasing number of divisions under which school finances are now regarded.

Superintendents, outside of the large cities--and even a great number of them--have, up to the present time incorporated in their reports only general expenses, such as, amounts invested in buildings and grounds, total of teachers' salaries, and expense of upkeep of the whole system including repairs, fuel and Janitor's supplies. In the majority of the reports no effort has been made to compare one year with another, to determine the per capita cost of educating a child in the different branches of the school, or to show the relative amount spent on the various systems. It is with items of this sort that the greatest amount of good is obtained when one report is compared with another.

While uniformity in school reports is very desirable, yet the reports on the items of expense must be accurate, complete and significant--uniformity of defects will not help. Dr. W. H. Allen says, "In delaying the adoption of adequate records, Educators overlook the fact that a system which fails to describe weaknesses, inefficiency and lack of progress, also conceals strength, efficiency and progress."¹

Although a school may show up poorly when first its financial items are compared with others, yet this very thing will tend to make the school go ahead and increase its

¹"Demand for Better School Reports." Re. of Rs. Vol. 33, p. 579.

efficiency, so far as can be done by the amount of money spent and its correct apportionment.

The two things which will help in producing better school reports are, (1) A standard terminology, so that all schools will know just what each heading means and what items of expense to group under it and (2) determining what divisions of total expense should be made.

It is with these topics that the discussion will now deal.

Chapter 17

Grouping of Financial Data to Secure Uniformity in Recording and Reporting.

Any system of school records and reports should contain only such tables as represent facts, the knowledge of which will help in increasing the efficiency of the school, either by aiding the administrator in his work or, in enlightening the public on matters with which it is vitally concerned. In his chapter on "Suggested Economics and Improvements for School Reports", Dr. Snedden says, "The first principle to be observed in making reports, is that only such data shall be collected and such reports prepared as will tend to answer, either now or in the future, questions bearing on educational efficiency and serve the purposes of school administration, either directly or through the indirect means of publicity."¹

The data should be recorded in as plain a way as possible. If quite a little time is required to solve the method used, the meaning of the statistical tables will not be brought to light in a majority of cases. A mere statement of totals is not sufficient. The meaning of large sums is beyond the comprehension of many and instead of clearing up the financial conditions of the schools, tends to make them hazier. Items of totality are often misleading to many who desire to compare their financial school reports with those of other schools.

¹"School Reports and School Efficiency."p.128.

Units which they can understand and comprehend must be introduced. Dr. Snedden says, "Units are indispensable in all forms of comparison, since other factors are seldom uniform."¹ It means a good deal more to the average parent to know the cost of educating his child is so many dollars, than to know that so many tens of thousands of dollars were ^{spent} on the schools in educating all the children of the community; or to know the cost of heating the room his child is in, than to know the total amount spent for fuel. He desires to compare the costs of this year with those of previous years, and an opportunity to do this should be given in tables of summary covering a period of several years. Where any interpretation of the tables is necessary the language used should be in the simplest form.

In cities of Missouri, having a population of five to ten thousand, a financial report of the schools should be published each year. By doing this the public will be continually reminded of the condition of its schools, based on the amount of money which they have given for school support.

The financial data of the school system divides itself into two groups, (1) the amount of money invested in permanent equipment, and (2) the current or running expenses. Under the first group the following items are considered: value of the different school buildings and grounds, cost of permanent equipment such as that of heating, lighting, gas and water connections in the laboratories, furni-

¹"Administration of Public Schools." p.528.

ture and fixtures in toilets. As these, when once put in, keep their original value, except for slight depreciations, over a somewhat long period, they assume a less important part of the report. If the particular school has not a modern building and equipment and the value of its plant very small, the comparative study of it will be very unfavorable when viewed with other schools, and will tend to arouse the public to the point where they will erect a better building. It is under such a condition that the first group of financial data have their greatest value.

One city may have a very fine building and equipment, yet its school may not be doing nearly so efficient work as one with a poorer arranged and equipped building due to the fact that the first city is not giving proper support in obtaining the greatest amount of good from its new building, while the second city is very generous with its allowances for current expenses. A comparison of current expenses then, seems to afford the best way for determining the rank of the several schools of the State.

The total amounts should be given in this group for they serve as a means of finding the proportionate stress placed on the schools to other institutions of the community, determined by the amount of money spent on each. But, here again items given in total are often misleading. One city may be spending as much or more than another city of equal population, when investigation shows that one part of its system is being greatly benefited at the sacrifice of another part just as important. Again one city, with practically the same population as a neighboring city, may

have quite a larger number of pupils in school and yet be spending very nearly the same total amount in educating its children. The condition in the first city will not tend nearly so much toward making the school efficient as that in the second city where each individual has more money spent in his behalf.

These two possibilities of total items giving misleading ideas, bring in the per centage and per capita phases of financial statistics; they also make it necessary that the per-centage and per capita costs be kept, not only for the whole system, but separately for High and Elementary schools and for each individual school.

In determining the per-centage which the different items bear to the total amount spent, a careful classification is necessary. The groups into which the current expenses are divided here follow very closely those given by Dr. Strayer in his study on "City School Expenditures." There are a few divisions which he gives, such as vacation and evening schools, that will be omitted from this classification, because at present the Missouri schools are doing very little in this line and these items are unnecessary.

The following are the groups to be used: (1) cost of supervision, (2) cost of business administration, (3) Janitor's salaries, (4) salary of truant officer, (5) teachers' salaries, (6) supplies used by pupils, (7) Janitor's supplies, (8) supplies for Board of Education and Superintendent, (9) laboratory supplies, (10) manual training supplies; (11) domestic science supplies, (12) fuel, (13) light and

power, (14) telephone, (15) water, (16) library, (17) postage and telegraph, (18) printing and advertising, (19) freight, and express, (20) ordinary repairs, (21) rent, (22) school enumeration, (23) insurance, and (24) other current expenses.

An explanation of the above groups is now given.

No. 1. Cost of supervision--includes the salaries of the Superintendent and Principals.

No. 2. Cost of business administration-- includes salary of Clerk and Treasurer of Board and any expense of Board members in attending associations or visiting other schools to get new ideas.

No. 3. Janitor's salaries--amount paid all Janitors and their assistants.

No. 4. Salary of Truant Officer--amount paid Truant Officer and assistant, if any.

No. 5. Teachers' salaries--amount paid all regular teachers, Substitutes and Trainers.

No. 6. Supplies used by pupils--includes paper, pencils, pens, ink, chalk, erasers, etc.

No. 7. Janitor's supplies--includes brooms, brushes, sweeping powder, towels and their laundering, toilet paper, soap, shovels, dust cloths, etc.

No. 8. Supplies for Superintendent and Board--includes stationary, typewriter, with its appliances, record books for Secretary and Treasurer, rubber stamps, clips, etc.

No. 9. Laboratory supplies--includes equipment of apparatus in all laboratories and necessary daily supplies such as chemicals, ice, matches, etc.

No.10.Manual Training supplies--includes equipment in way of benches and tools, and necessary lumber.

No.11.Domestic Science supplies--includes equipment and groceries needed.

No.12.Fuel--includes coal, wood and any other material used in furnace.

No.13.Light and Power--electricity used in lighting and running motors;gas used in laboratories and domestic science room.

No.14.Water--used in heating system, toilets,drinking and laboratories.

No.15.Telephones--in all buildings and Superintendent's office where he has a private phone.

No.16.Library--books, magazines,newspapers,also index and loan slips.

No.17.Postage and Telegraph--all outside communication connected with running the schools.

No.18.Printing and Advertising--blanks for records and reports of Principals and Teachers and any advertising done.

No.19.Freight and Express--on all supplies purchased where the school has to pay for delivery including drayage.

No.20.Ordinary repairs--window glass, door knobs,plumbing work, furnace fixtures, broken seats, etc.

No.21.Rent--where outside buildings are used and money paid for same.

No.22.School enumeration--taking census of school children.

No.23.Insurance--premiums on all policies.

No.24.Other current expenses--any items not included above.

The report should also include a list of the number of teachers receiving the different salaries paid by the Board.

As stated above each one of these twenty-four divisions should be worked in percent of total amount spent, and amount spent on each child, or per capita cost, for the whole system, and separately for High and Elementary schools, and finally for each individual school.

Arrangement should be made in the blanks for comparing these divisions over a period of several years; for any one school may show up very poorly or exceedingly well one year, and the next year the reverse may be true. When the above divisions of expense have been worked out, many valuable reclassifications can be made.

Blanks will now be devised so these items can all be entered with the least possible trouble, and be readily understood by those reading them.

Chapter V

A Set of Blanks for Recording and Reporting School Financial Statistics.

The following set of blanks has been designed to cover school expenses in three ways. First: total amounts spent are provided for, second: the per cent which each division bears to the total amount is taken up, and third: the per capita cost on each division is given. Each of these is in turn compared over a series of years, for both High and Elementary schools, and for each school of the entire system.

This plan of arranging the blanks is the result of a combination of recommendations of Dr. G.D.Strayer,¹ Dr. Harlan Updegraff,² Dr. D.S.Snedden,³ Professor Dutton,⁴ and Dr. W.H.Allen,³ all of whom have been working on school financial statistics.

In figuring the per capita cost the divisor used is the one recommended by Dr. Strayer, namely the figure half way between the average daily attendance and the enrollment.

While the number of divisions into which the expenses have been separated is larger than at present called for by the State Department, in making up its report, yet these same blanks can readily be used in compiling data for this report, by merely combining groups

1."City School Expenditures".2."A Study of Expenses of City School Systems. 3." School Reports and School Efficiency.4." Administration of Public Schools."

in this classification which are not divided in the State report.

In the last report of the United States Commissioner of Education three items are called for in the financial data that are not given in this classification, namely: transportation of pupils, health promotion, and text books. Since the same form of National blanks is used in all the States, these items are necessary for States that may provide for these three things. As Missouri schools do not have occasion to spend money in these lines, at present, these divisions have been omitted from the classification. In all other respects the data recorded in these blanks can easily be used in compiling the National reports.

In figuring the expenses separately for High and Elementary Schools, and for each of the individual schools, three of the divisions given for the whole school are omitted, namely: salary of business administrator, salary of truant officer, and supplies for Board and Superintendent. There is no definite way of calculating these except for the whole system, and consequently they have been omitted from the other classifications.

Table No.1. Showing expenses of whole system over
a number of years.

	1913	1914	1915	1916
1.Supervision.				
2.Business Administration.				
3.Salary of Janitors.				
4.Salary of Truant Officer				
5.Salary of Teachers.				
6.Supplies used by Pupils.				
7.Janitor's supplies.				
8.Supplies for Board and Superintendent.				
9.Laboratory supplies.				
10.Manual Training supplies.				
11.Domestic Science.				
12.Fuel.				
13.Light and power.				
14.Water.				
15.Telephone.				
16.Library.				
17.Postage and telegraph.				
18.Printing and advertising.				
19.Freight and express.				
20.Ordinary repairs.				
21.Rent.				
22.School census.				
23.Insurance.				
24.Incidentals.				
Totals.				

Table No.2. Comparison of items for Elementary and High Schools over a number of years.

	1913.		1914		1915	
	High	Elem	High	Elem	High	Elem
1.Supervision.						
2.Salary of Janitors.						
3.Salary of Teachers.						
4.Supplies used by pupils.						
5.Janitor's supplies.						
6.Laboratory supplies.						
7.Manual Training.						
8.Domestic Science.						
9.Fuel.						
10.Light and power.						
11.Water.						
12.Telephone.						
13.Library.						
14.Postage and telegraph.						
15.Printing,advertising.						
16.Freight and express.						
17.Ordinary repairs.						
18.Rent.						
19.School census.						
20.Insurance.						
21.Incidentals.						
Totals.						

Table No.3. Comparison of expenses of different schools over a number of years.

Name of School	1913				1914			
	A	B	C	D	A	B	C	D
1.Supervision.								
2.Salary of Janitors.								
3.Salary of Teachers.								
4.Supplies for pupils.								
5.Janitor's supplies.								
6.Laboratory supplies.								
7.Manual Training.								
8.Domestic Science.								
9.Fuel.								
10.Light and power.								
11.Water.								
12.Telephone.								
13.Library.								
14.Postage,telegraph.								
15.Printing,advertising.								
16.Freight and express.								
17.Ordinary repairs.								
18.Rent.								
19.School census.								
20.Insurance.								
21.Incidentals.								
Totals.								

Table No.4. Percentage which each item bears to total expense of entire system over a number of years.

	1913	1914	1915	1916
1.Supervision.				
2.Business Administration.				
3.Salary of Janitors.				
4.Salary of Truant Officer.				
5.Salary of Teachers.				
6.Supplies for pupils.				
7.Janitor's supplies.				
8.Supplies for Board and Superintendent.				
9.Laboratory supplies.				
10.Manual Training.				
11.Domestic Science.				
12.Fuel.				
13.Light and power.				
14.Water.				
15.Telephone.				
16.Library.				
17.Postage and telegraph.				
18.Printing, advertising.				
19.Freight and express.				
20.Ordinary repairs.				
21.Rent.				
22.School census.				
23.Insurance.				
24.Incidentals.				
Totals.				

Table No. 5. Per-centage each item bears to total expense for High and Elementary Schools.

	1913		1914		1915	
	High	Elem	High	Elem	High	Elem
1. Supervision.						
2. Salary of Janitors.						
3. Salary of Teachers.						
4. Supplies for pupils.						
5. Janitor's supplies.						
6. Laboratory supplies.						
7. Manual Training.						
8. Domestic Science.						
9. Fuel.						
10. Light and power.						
11. Water.						
12. Telephone.						
13. Library.						
14. Postage and telegraph.						
15. Printing, advertising.						
16. Freight and express.						
17. Ordinary repairs.						
18. Rent.						
19. School census.						
20. Insurance.						
21. Incidentals.						
Totals.						

Table No. 6. Percentage each item bears to total
expense for each school.

	1913				1914			
Name of School.	A	B	C	D	A	B	C	D
1.Supervision.								
2.Salary of Janitors.								
3.Salary of Teachers.								
4.Supplies for pupils.								
5.Janitor's supplies.								
6.Laboratory supplies.								
7.Manual Training.								
8.Domestic Science.								
9.Fuel.								
10.Light and power.								
11.Water.								
12.Telephone.								
13.Library.								
14.Postage,telegraph.								
15.Printing,advertising.								
16.Freight and express.								
17.Ordinary repairs.								
18.Rent.								
19.School census.								
20.Insurance.								
21.Incidentals.								
Totals.								

No.7.Per capita cost on epenses for entire system.

	1913	1914	1915	1916
1.Supervision.				
2.Business administration.				
3.Salary of Janitors.				
4.Salary of Truant Officier.				
5.Salary of Teachers.				
6.Supplies used by pupils.				
7.Janitor's supplies.				
8.Supplies for Board and Superintedent.				
9.Laboratory supplies.				
10.Manual Training.				
11.Domestic Science.				
12.Fuel.				
13.Light and power.				
14.Water.				
15.Telephone.				
16.Library.				
17.Postage and telegraph.				
18.Printing,advertising.				
19.Freight and express.				
20.Ordinary repairs.				
21.Rent.				
22.School census.				
23.Insurance.				
24.Incidentals.				
Totals.				

Table No.8.Per capita cost of High compared with Elementary School.

	1913		1914		1915	
	High	Elem	High	Elem	High	Elem
1.Supervision.						
2.Salary of Janitors.						
3.Salary of Teachers.						
4.Supplies for pupils.						
5.Janitor's supplies.						
6.Laboratory supplies.						
7.Manual Training.						
8.Domestic Science.						
9.Fuel.						
10.Light and power.						
11.Water.						
12.Telephone.						
13.Library.						
14.Postage and telegraph.						
15.Printing,advertising.						
16.Freight and express.						
17.Ordinary repairs.						
18.Rent.						
19.School census.						
20.Insurance.						
21.Incidentals,						
Totals.						

Table No.9. Per capita cost of each school.

	1913				1914			
	A	B	C	D	A	B	C	D
1.Supervision.								
2.Salary of Janitors.								
3.Salary of Teachers.								
4.Supplies for pupils.								
5.Janitor's supplies.								
6.Laboratory supplies.								
7.Manual Training.								
8.Domestic Science.								
9.Fuel.								
10.Light and power.								
11.Water.								
12.Telephone.								
13.Library.								
14.Postage,telegraph.								
15.Printing,advertising.								
16.Freight and express.								
17.Ordinary repairs.								
18.Rent.								
19.School census.								
20.Insurance.								
21.Incidentals.								
Totals.								

Table No.10.Value of equipment and cost of instruction of special subjects in the High school.

Subject.	Value of equipment.			Cost of instruction.		
	1913	1914	1915	1913	1914	1915
Manual Training.						
Domestic Science.						
Drawing.						
Music.						

Table No.11.Per capita value of equipment and cost of instruction of specialities in the High School.

Subject.	Value of equipment.			Cost of instruction.		
	1913	1914	1915	1913	1914	1915
Manual Training.						
Domestic Science.						
Drawing.						
Music.						

Table No.12. Salary schedule of Elementary Teachers.

No.of Teachers receiving.	Salary.
-----	\$ 30
-----	40
-----	50
-----	60
-----	70
-----	80

Table No. 13. Salary schedule of High School Teachers.

No. of Teachers receiving.	Salary.
-----	\$ 50
-----	60
-----	70
-----	80
-----	90
-----	100
-----	above 100

Table No.14.Value of plant and permanent equipment.

[illegible]

Table No.15.Per capita value of plant and permanent equipment.

[illegible]

To test the applicability of these blanks for use in Missouri schools, Columbia has been taken as a representative city, and the expense of running the schools in this system obtained from Superintendent McPherson. After studying the figures on the cost of the Columbia schools, with the point in mind, of determining how far the blanks drawn up were adequate for use in recording all these expenses, the following conclusions were reached. First: there is no item of expense in the Columbia system which is not cared for by the blanks. Second: there is no division of expense given in the blanks under which Columbia has not an item to be entered except "Rent" and "Domestic Science". The first of these fails to appear on the Treasurer's books because the school system has sufficient buildings for its use. The second does not appear because at present domestic science courses are not offered.

Since these blanks were devised with the whole State in view, it is not difficult to justify the presence of these two items. In several places, at present, the town has not provided sufficient buildings for the use of the school, and must rent, for a while at least, other buildings. As the cities over the State furnish adequate room for the schools this item will become less and less important, but at present should be included. For the second item-- in the last State Superintendent's report, thirty cities are reported as giving courses in domestic science, and have items of expense recored under this head.

It is not the intention to leave the impression that the expenses of the Columbia schools are recorded in the

Treasurer's books in such a way that the set of blanks could be immediately filled out by any one who examined the books, for such is not the case. The bills allowed by the Board and paid by the Treasurer are all recorded, and for what purpose is likewise given. But when it comes to finding out just how much the expense of each school has been, when to its clearly defined cost there must be added a proportionate cost of articles bought in quantities, the Superintendent must be called in, for he is the only one who knows just where the material has been distributed. Nor do the Treasurer's books show the amounts spent on the High and Elementary schools in those items where large quantities of a substance are bought at once and later distributed; here again the Superintendent must be relied upon to give the exact division.

Through the Treasurer of the Columbia School Board, the following recommendations on the keeping of school accounts, are made to Treasurers over all the State. First: an account should be opened with each of the twenty four divisions given in the blanks-- unless there is some division under which he is sure he will have no items to enter, as the two in Columbia. Second: that each of these accounts be kept separately for the High and Elementary Schools. Third: that each school be given a separate account and charged, in addition to the moneys spent directly on it, its proportionate share of material bought in quantities, based on the amount of such material distributed to it. Fourth: That these three groupings be made year by year, so the whole thing of school expense can be summed up in

a very little time.

As an aid to the ^aTresurer, it would be well for Superintendents to mark on bills-- except those which come under ordinary heads, as fuel, light, water, salaries, etc.-- in what division of the classification they belong. This will tend to prevent any mixing of the items.

Granting then that Columbia is a representative City of Missouri, and using the report of its school finances to test the applicability of the blanks for recording school expenses all over the State, it is found that they serve every adequate need, and that no unnecessary divisions have been made, except the two noted above, together with their justification for appearing in the set of blanks.

Conclusion.

One of the greatest benefits arising from classifying school expenses, as outlined above, is that it will enable the Board and Superintendent to make a budget for each year. Very often at the end of one year they have no idea how much money should be spent on the various parts of the school system for the next year. With the tables before them showing just what has been spent in the past year on each division, with the Superintendent's recommendations on the efficiency and needs of each part of the school and, knowing approximately how much money will be at their disposal, the Board should apportion this money where it is most needed and see that sums are provided to build up those parts which are relatively weak. When the money has been apportioned in this way, the sum allowed each division should not be increased by those expending the money, without the consent of the Board, and then only in extraordinary cases and where other divisions will not be neglected.

The Superintendent's approval of the bills, as suggested above, will tend to keep these amounts within their limits. He should know that any account has a credit balance before he recommends that any more money be expended which will draw on that particular account. At each monthly meeting it will be well for the Treasurer to furnish the Superintendent a report showing the balance of each account, based on the amounts allotted in the budget and the sums already spent and debited to each account.

When Superintendents have their expenses classified under the divisions given, and compare with reports of other Superintendents, they will find many and wide variations in different parts of their reports. Dr. Strayer, in his comparison of expenses of school systems in the East shows how different items vary. For instance the cost per pupil for maintenance and operation varied from nine to fifty dollars; the percent of the total cost of schools which is applied in teaching and supervision, varies from forty-four to eighty-two percent; and again Janitor's salaries vary from three to nine percent of the budget.¹

If the financial data of Missouri schools were collected as Dr. Strayer did those of Eastern cities, no doubt the variations would be as great, if not greater than those he found, because many school systems in Missouri are just starting their real growth.

It would be impossible and even not desirable to have all the cities of Missouri spending practically the same amounts, comparatively, on each of the divisions of school expense, owing partly to a natural difference of the localities and further, the stage of progress for all schools can not be expected to be the same at any one time. But the difference in localities plays only a very small part in such wide variations. Undoubtedly some schools spend far less than they should on the whole system; others are very weak in certain branches, and some are able to keep all the parts in the best of shape, especially is this

1." City School Expenditures." p.100.

true if the community is wealthy and the people are very interested in the schools.

The best way for a Superintendent to tell if his school compares favorably with other schools, is to find out if his allowances for the various financial groups fall in the middle fifty percent of all the schools reporting. If his expenses in all the groups do fall here, he can be sure that he is ranking with half the schools of the State. If he is below the median, or the school ranking in the middle of those reporting, he should try to raise the efficiency of the school until it stands where there are an equal number below and above him, as regards expenses in all the branches. If his school is above the median, he should keep it there. If some parts are above and some below the median, those below should be raised, even, if in spending money on them the other parts are brought down to the median. a well balanced system is much better than one excelling in some parts and and very weak in others.

An example of an unbalanced system is to be found in case of the Shelbina school, where, according to the last State Superintendent's report, the Elementary school with more than twice as large an enrollment received less money for maintenance. A visit made to this school during this present year, tends to bear out these facts and shows that the High School is receiving an undue portion of the school moneys, to the neglect of the Elementary School. Such a condition as this should be remedied and afford to

the children in the Elementary School just as good opportunities, comparatively, as those in the High School.

In conclusion then, the benefits that are to be expected from recording and reporting financial data of schools in a systematized way may be stated. First: the Superintendent and Board will be aided in determining the efficiency of their school, so far as the amount of money spent on the school is concerned. Second: it will enable them to make a budget for each year and to know just how much they can afford to spend on each branch of the school. Third: it will be a means of interesting the community in the schools and thereby increasing the amount of money voted for the use of the schools.

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