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Costs and Business Management of the Public Schools
of Charlevoix, Michigan.

A Dissertation

Submitted to the faculty
of the graduate school of arts and literature
in candidacy for the degree of
doctor of philosophy

Department of Education

by
Harry A. ^{Allen} Craig
1918.
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Definition of Terms.

Cost of administration; refers to payments made for control, management, regulation and executive work, as distinct from payments for actual performances of the work thus regulated. The board of education administers the entire system; the superintendent administers his control of the schools; the teacher on the other hand operates the function of teaching; the janitor operates the function of caring for and running the school plant.

Cost of maintenance; synonymous with cost of upkeep, includes all payments made in the restoration of any piece of property to its original condition of efficiency.

Capital outlay: refers to cost of permanent improvement of the school plant.

Current expenditure is all expenditure in the school system exclusive of capital outlay.

Cost for business purposes includes all expenditures for supplies, auditing and finance, all operation and maintenance.

Cost for educational purposes included all expenditures for superintendent's office and supplies, salaries of teachers, supervisors, principals, educational supplies, and in fact all instructional expense of the school system.

The median is the middle point of a series of figures. The median is the point where half of the series of figures are above and half below. The median was used in this discussion because it gives less weight to the high or low figures of the list. In discussion of the cost of a school system, great variation might be expected, and median would more nearly meet the actual condition than some other standard type of measurement.

Cost of supervision and instruction includes payment for services of all persons, who in any form have supervision or who teach in the school system.

Note: In all cases in this thesis the median is used as the approximate median, or middle point, and not the ~~true~~ median.

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I. Introduction

1. General

This thesis is a survey of the cost and the management of the public school system of Charlevoix, Michigan. The thesis is divided into two parts. Part one compares the costs of the Charlevoix school system with the costs of school systems in cities of from five to eight thousand population. It would have been somewhat better to have compared the costs of the Charlevoix school system with those of school systems of equal size. But reports for towns of this size are not readily available because there is no uniform method of keeping the records and administration of towns of less than five thousand population are not required to make reports to the United States Commissioner of Education. Part two discusses the business management of the Charlevoix school system. It describes the method of raising, and expending the money used in the running of the Charlevoix school system.

In making this comparison with towns of greater population than Charlevoix, it will be easy to determine how much Charlevoix spends on its school system in comparison with the ^uamounts spent by larger cities. It will thus be possible to rank Charlevoix as to its expenditures for school purposes with cities of greater population. Possibly none of the cities used in the discussion are spending sufficient money on public education, therefore it will be impossible to state with any great degree of certainty whether Charlevoix is meeting its responsibility in the matter of expenditure for public education. However if Charlevoix ranks high

in expenditures for school purposes as compared with the cities in the five to eight thousand class, it would seem that Charlevoix is meeting the general practice of expenditure for public education.

A. Charlevoix Historically.

Charlevoix is situated on the western side of Michigan, on the shore of Lake Michigan and near the base of Little Traverse Bay. It is also situated on the Western shores of two small lakes called respectively Round and Pine Lake, both of these lakes empty into Lake Michigan.

Charlevoix developed to its present size, through a long period of lumbering, That industry however has now practically disappeared and the resort trade may now be said to be its greatest asset.

The town has about three thousand population. In regard to the population at present conditions are nearly static. Unless a larger resort trade can be encouraged or factories can be caused to locate, Charlevoix will probably remain at its present status. The probability of any great industrial growth is hardly possible, in view of the attention given to the resort trade. Conditions at present seem to point to the facts that the growth of Charlevoix will be slow, and that it will be in the direction of a greater resort trade, rather than increased industrial activity.

Part I.

II. School Costs

I. Sources or Revenue

A. Taxation as a source of Revenue.

From table 1 it is plain that the assessed valuation of the city of Charlevoix has increased slowly from the year 1912-13 to 1916-17 inclusive. The gain for the five years was \$152,420.00. Such a gain made an average increase of about \$30,000.00 a year, This was by no means a large growth, in fact it showed a rather static condition. At the present rate of growth the amount of money that the city of Charlevoix may expect to receive from the taxation of the property for school and other purposes, will remain about stationary. The only hope of receiving more money for the schools will be through an increase in the mill rate. Under the present conditions it seems that the amounts to be received from the city for school purposes will be very constant.

The city of Charlevoix evidently attempted to reduce the number of mills for general city tax. In the year 1912-13 the city raised 15.5 mills, this number was decreased to 10 the next year to seven the following year, only to be raised to 8 mills in 1915-16. The excessive high tax for the year 1912-13 was due to the fact that the previous administration had attempted to gain favor with the people by reducing the tax rate. The result was that the administration previous to the year 1912-13 left many debts when it went out of power. In order to meet these debts the mill rate was raised.

The figures in table 1, bring out the facts that the Charlevoix Township valuation has been on the increase for the past years, beginning with 1912-13. The total increase has been for the five years \$10,635.00, which makes about \$2000.00 a year. Judging from past achievements it is evident that the amount of money that will be received from that source will not materially increase in the future.

From the previous discussion it seems evident that the amount of money received from the taxation of the city of Charlevoix and the township of Charlevoix, will be rather uniform as a great increase in the assessed valuation cannot be expected.

Table 1.

Assessed valuation of City of Charlevoix, and township of Charlevoix, Total General Tax, and mill for General Tax. Five years.

Year	Assessed Valuation City of Charlevoix	Total General Tax	Gener- Mills General City Tax	for Charlevoix Township Valuation
1912-13	\$2,262,540.00	\$35,079.91	15.5	\$195,220.00
1913-14	2,281,145.00	22,817.25	10.	210,000.00
1914-15	2,364,945.00	20,560.35	7.	219,895.00
1915-16	2,382,795.00	19,065.60	8.	215,420.00
1916-17	2,414,960.00	24,149.60	10.	225,855.00

a. Charlevoix City School Tax.

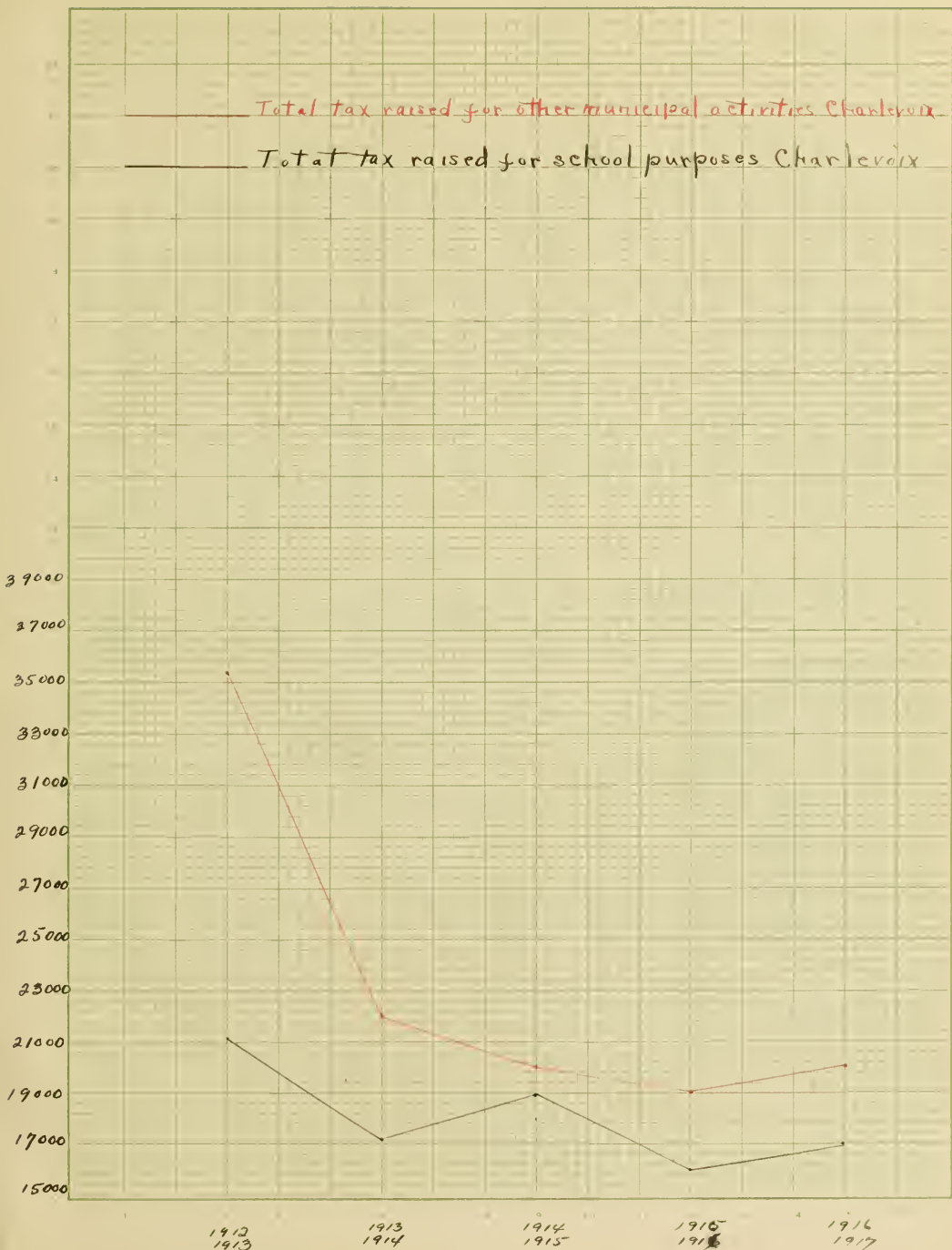
b. Charlevoix Township School Tax.

Through the taxation of the city of Charlevoix, the school district receives its largest amount of money for school purposes. In the organization of the school district the entire township is included. This was thought to be a wise solution of the problem. The outlying districts which would have been left, had the city been taken out of the township would have been too small to support good schools. The legal name of the Charlevoix school system is "District No. 1 Charlevoix City and Township."

Through the incorporation of the township of Charlevoix with the city of Charlevoix as one school district a dual system of the revenue has resulted. Today this district No. 1 in the administration of its school system receives money both from the city proper and from the township of Charlevoix.

Table 2 gives the amounts received as a result of taxation by the school district for school purposes, from the city of Charlevoix and the township of Charlevoix for five years beginning with 1912-13.

The amount of taxes received from the city for school purposes has been very uniform for the time considered in this report. The highest uniform for the time considered in this report. The highest amount was in 1912-13; it being \$22,631.40. The lowest amount was in 1915-16 when the amount was \$16,679.57. In fact the schools of Charlevoix received less money from the city during the years 1915-16 and 1916-17 than they did during the three years previous. The cause of this was the difference in the mills raised on the taxable property. The increase in the rate of the first three years over



the last two was not caused by any reduction in the administration of the public schools during the last two years, but to the buying of an athletic field during the previous years. The field being paid for out of the regular taxes.

The money raised from the taxing of the township of Charlevoix, for school purposes has also made a slight increase for the five years included in the study. The amounts received from this source show the same general character as those received from the city. The highest amount received from the taxation of the township, during the five years, was \$1,758.90 and the lowest amount was \$1,220.50. On the average the school board/ can count on about \$1,500.00 from this source from year to year.

Table 2.

Charlevoix City School tax, Charlevoix Township school tax,
Mills for school tax, five years, Charlevoix.

Year	Charlevoix City School Tax	Mills for School Tax	Charlevoix Township School Tax.
1912-13	\$22,631.40	10.	\$1,758.90
1913-14	17,108.59	7.5	1,220.50
1914-15	18,919.56	8.	1,573.49
1915-16	16,679.57	72	1,489.90
1916-17	16,906.45	7.	1,513.06

B. Primary School Money as a source of Revenue.

Each year the State of Michigan gives what is called primary school money to all school districts. The amount given to each district depending upon the number of school children in each district. The school census counts all children between the ages of five to twenty, who reside in the school district when the census is taken. This is done during the twenty days next preceeding the first ~~ix~~ of June of each year.

TABLE III.

Money received from the State of Michigan, from Primary School Fund, Five years, Charlevoix.

Year	Money received from Primary School Fund
1912-13	\$5,289.50
1913-14	5,164.77
1914-15	5,254.00
1915-16 7	5,777.60
1916-17	5,567.10

The primary school fund has been a source of revenue that has been very constant. In table III the figures show that in 1912-13 the amount received from the primary school fund was ~~\$5,511.12~~ \$5,289.50. In the year 1915-16 the amount of money from this source went up to \$5,777.10 only to drop back in the next year to \$5,567.10. This source renders to the school revenue of the city of Charlevoix about \$5,000.00 a year. This amount will not increase unless there is a sudden influx of children into the school district, which will raise the number that appears on the school census. That would of course mean an increase in population which seems improbable in view

of the present conditions. A discussion of this point occurred earlier in the thesis.

The amount of money raised by taxation, in the city and township of Charlevoix, for school purposes for the five years 1912-13 to 1916-17 inclusive has been very uniform. The board of education has not seen the need to raise the mill tax so that a larger revenue could be secured through these sources. The increased costs of running a school, both for supplies and for instruction will without a doubt cause a raise in the mill tax in the near future. In fact the board of education has recently discussed this proposition and has come to the conclusion that such a step will be necessary during the coming year. The amount that would be thus raised, would simply meet the increased costs of administration, due to the prevailing conditions, and would not provide any enlargement of the school activities.

D. Tuition of Foreign Students.

Charlevoix has on the average about thirty students who attend the high school each year from outlying districts, which do not maintain a high school. The tuition is \$18.00 per year for such students. The number of students of this type is increasing from year to year. For the five years covered in this discussion the school district has received each year about \$500.00 from this source. The records made it impossible to secure any exact information on this subject. However the figure given above may be taken as a fair estimate of the expected from this source.

E. Fines.

A very small amount of money is secured through fines each year. It is however so small as not to make any material difference. Data on this matter were impossible during the years considered in

this discussion.

F. Revenue from the Book Store.

The district retails all the school books to the pupils in the Charlevoix School system. The law provides that a ten per cent profit may be made on these sales. This source of revenue nets about one hundred dollars per year to the revenue of the school system.

Summary:

Thus far I have shown the condition of the city of Charlevoix together with the sources from which the main portion of the revenue to run the Charlevoix public school is secured. The main sources are first, taxation upon the assessed valuation of the city of Charlevoix, second taxation upon the assessed valuation of the township of Charlevoix, and third from the primary school money secured from the State of Michigan. It has been shown that from all these sources the amounts received for the past five years, 1912-13 to 1916-17 inclusive have been uniform. Under the present conditions it does not seem probable that the amount of money secured through these sources to run the school system of Charlevoix will be greatly increased.

C. Bonding as a source of Revenue.

The use for which school money is to be expended should in some measure determine the method by which it is to be raised. If the money is to be raised for the use of current expenses, then the method of taxation is the only logical one. The benefits derived from the expenditure of money for current expenses in a school system are transitory, and the returns on the investment are secured in the immediate present. Each taxpayer receives full value for the money expended.

Immediate returns for the money spent do not represent all types of expenditures incurred in the conducting of a school system. In the expenditure of money for outlay, such as new buildings, or new grounds, or additions to old buildings, the benefit is not immediate, and the services that will be rendered by such an outlay will last for a long period. This is especially true in small cities where the growth of the population is not fast enough to warrant the building of new buildings at short intervals. In the case of Charlevoix it has been seventeen years since a new building has been erected. Previous to that it was a period of twelve years, between the building of a new building. Since the intervals between erecting of new buildings are comparatively long and the services received meet the community needs for a relatively long period, the money secured to erect such buildings should not be paid out of the money raised by taxation. In small cities bonding furnishes an equitable method of raising money for school buildings. By this method the cost of such buildings is spread over a series of years.

Charlevoix has not taken advantage of this method of raising money in the very near past. It however was used in the erection of the Union School in 1889, and also in the erection of the McKinley School in 1901. The bonds issued in 1889 and 1901 were respectively for \$13,000.00 and \$10,000.00. The bonds issued in 1889 were to run twenty years with five per cent interest. The bonds issued in 1901 were to run ten years with five per cent interest.

In July 1909 the bonds that were issued in 1889 for \$13,000.00 were partially taken care of by paying off \$4000.00 worth of the bonds from a sinking fund. The remaining \$9000.00 worth were refunded and to pay interest for ten years at five per cent. Also an annual tax was levied on all taxable property, sufficient to provide a sinking fund to the amount of \$1,000.00 annually. This sinking fund was to pay the principal on these bonds when they became due. This has been the policy of the board of education from that time. Under this scheme the bonds issued in 1889 will be redeemed during the year 1917-18.

The bonds issued in 1901 to run ten years are still unredeemed, making the total indebtedness of the Charlevoix school district at the present time \$11,000.00.

The bonds are being reduced at the rate of one thousand dollars per year. At this rate it will be eleven years before the bonded indebtedness will be paid. While this seems a very good scheme it is open to some criticism. It is almost certain that before the maturity of these bonds, that new buildings will be needed in Charlevoix. The type of instruction which will be demanded in eleven years will make this a necessity, even if the growth of the population does not over crowd the present buildings.

In eleven years the present buildings will have served their purpose in the education of the children of the community, and should no longer be a debt upon the taxpayers.

While bonding is an equitable method of raising money for school buildings in small cities, it should be so regulated that the expenditures for such outlays should be met by those who receive the services. In the case of Charlevoix the refunding of the bonds in 1909, and allowing the bonds issued in 1901 to over run their stated time for maturity, has postponed the redemption of these bonds until it seems fair to state that the people of Charlevoix will be paying for the Union and McKinley building after they have rendered their allotted services, and new building will be demanded.

2. Expenditure of School Money, Charlevoix.

A. Expenditure for Elementary School Instruction

B. Expenditure for Secondary School Instruction.

In discussion the expenditures for instruction in the elementary and secondary school an important type of expenditure is examined. Instruction taken in the broad sense is the business of a school system. It is therefore important to examine the amount of money spent in the Charlevoix school system for instruction. Under the present organization of the school system it is convenient to discuss this expenditure under two heads; first the cost of elementary instruction, and second the cost of secondary instruction. The tables 4 and 5 show the expenditures in the Charlevoix school system for instruction in classified form, during the years 1912-13 to 1917-18 inclusive.

The figures in table 4 show that the total annual expenditure for elementary school instruction has been very uniform, during the five years under discussion. The total expenditure for elementary instruction has increased in the five years \$1120.34, which would make an average increase of about two hundred and fifty dollars per year.

In the examination of the annual average salary the same condition of uniformity exists. The highest annual average salary paid during the five years was \$558.40 which was a gain of only about fifty dollars in five years. However the gain in the amount of the annual average salary in the elementary school has made most rapid progress during the last three years covered by this discussion. During the years 1912-13 and 1913-14 the average salary remained about the same. The reason for the in-

crease is due to two causes; first the board of education has attempted to increase the tenure of the elementary teachers, and second the increase in salary paid to all teachers due to prevailing conditions. An examination of the tenure of the elementary school instructors shows that one teacher was teaching her thirteenth year, one her twelfth year, two their fifth year, three their third year, and only two teachers were teaching their first year in Charlevoix. It is a wise policy to maintain the teaching staff for a series of years, if they are efficient. Charlevoix seems to have done this in the elementary schools without greatly increasing the expenditure for elementary instruction.

Table 5 shows the annual total expenditure for secondary instruction in Charlevoix has been uniform for the five years under discussion. The increase for the five years in the total expenditure for secondary instruction was only \$774.77, or about an average of \$155.00 for each year. The average salary continued to decrease from 1912-13 to 1915-16 but the year following a decided increase took place. This uniform amount paid for secondary instruction is in a degree explained by the discussion which follows.

a. Tenure of Office of High School Instructors a
Factor in Keeping Down Salary Schedule.

An examination of the tenure of office of the secondary teachers in Charlevoix for the present year reveals the following facts. Three teachers were teaching their first year in the system. One teacher had taught five years in Charlevoix. One teacher had taught twelve years in the high

school. Two teachers had taught two years in the system. Out of the total of six and two thirds teachers, in the high school three were teaching their first year. This means that practically half of the faculty was new for the present year. The principal had been promoted from the science department and was without experience in administrative work.

This change in the personnel of the high school faculty will in some measure explain the very small increase in the salaries paid. It is evident that Charlevoix does not pay the high school teachers sufficient to retain them for a series of years. The teachers come to the system without experience, or with very limited experience, stay one or two years and then are attracted to other places by higher salaries or better conditions. That this condition exists to some degree in all small high schools is certain. However this should be a serious matter of concern for those in administrative positions. It is practically impossible to secure good results and to develop a strong system, with the personnel of the faculty in a constant state of flux. The salary schedule should be sufficient to hold the teachers for a period of years. Thus a strong system could be worked out and more efficient educational results secured.

Table 4

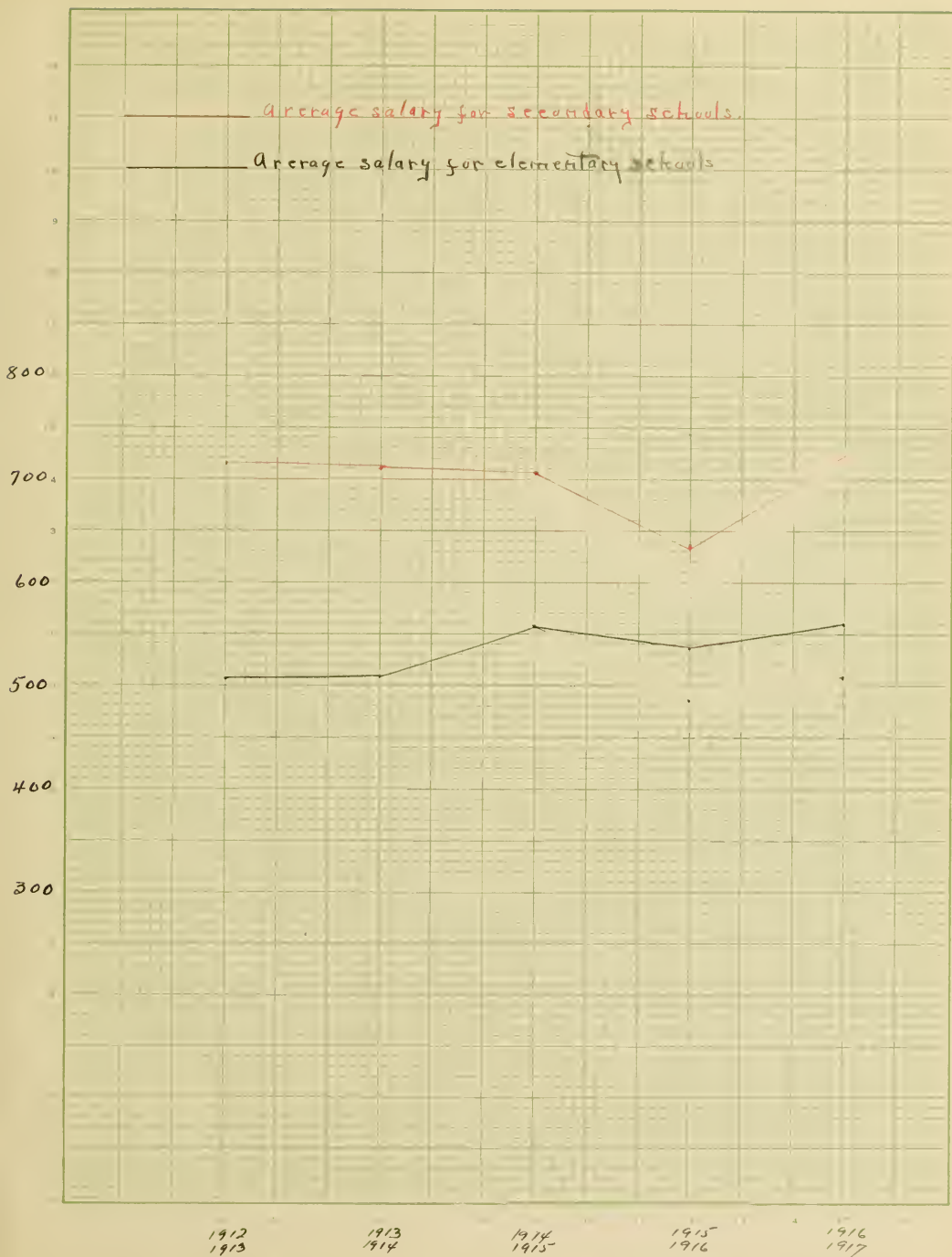
The Annual average salary paid to regular teachers in the elementary school. Charlevoix, 1912-13 to 1916-17 inclusive.

Year	Number of Regular Teachers	Total Expenditure Salary	Average Salary
1912-13	11	\$5,582.50	\$507.50
1913-14	11	5,602.00	508.55
1914-15	11	6,097.50	554.32
1915-16	12	6,438.78	536.50
1916-17	12	6,702.84	558.40

Table 5

The Annual average salary paid to regular teachers in the secondary school , Charlevoix, 1912-13 To 1916-17 inclusive.

Year	Number of Regular Teachers	Total Expenditure Salary	Average Salary
1912-13	5 2/3	\$4,050.00	\$715.54
1913-14	5 2/3	4,028.34	711.66
1914-15	5 2/3	4,005.20	707.63
1915-16	6 2/3	4,217.16	633.20
1916-17	6 2/3	4,799.94	720.71



b. Number of Pupils per Teacher Versus Cost of Instruction.

The cost of instruction per pupil in a school system will be largely determined by the number of pupils per teachers. It is quite evident that the cost of instruction per pupil can be increased by having a small number of pupils per teacher. This condition of a small number of pupils per teacher is generally operative in small school systems, where the curriculum is broad in its scope, and the average daily attendance is small. Any attempt to meet the modern demands upon the school, will in a small system increase the per pupil cost, since there is a limited number to divide among the courses offered. Also any instruction is costly that does not produce good results. The results are in some degree determined by the number of pupils per teacher. It is a recognized fact that up to a certain number of pupils an efficient instruction can be secured as with a smaller number. The maximum standard set by the North Central Association for secondary schools is thirty pupils per teacher. It is evident that it thinks that thirty pupils is the largest group a teacher can handle and at the same time secure efficient instruction. However twenty to twenty five pupils per teacher in secondary schools would form a group where efficient instruction should be secured easily. With a group of this size, individual work and personal contact is possible which make for good instruction.

In the case of Charlevoix the median number of pupils per teacher in the high school as shown by table 6 is 19.4. In comparison with the eighteen cities Charlevoix stands seventh in reference to the number of pupils per teacher in the high

School. In other words ten of the seventeen cities of from five to eight thousand population as shown by table 7 had a larger number of pupils per teacher than Charlevoix. In view of the practice of the seventeen cities Charlevoix could increase the number of pupils per teacher in the high school and thus materially decrease the cost of instruction per pupil. With only about twenty pupils per teacher it is evident that Charlevoix at present is making adequate provision for good instruction as far as number of pupils per teacher is concerned. The teachers in the high school are not over burdened to the extent that good instruction is impossible. As stated above Charlevoix could even increase the number of pupils per teacher and still insure good instruction, and also reduce the cost per pupil.

In regard to the number of pupils per teacher in the elementary school Charlevoix stands thirteenth as compared with the eighteen cities. Charlevoix's median for pupils per teacher was 31.3 which places Charlevoix near the bottom of the list. Only four cities in the five to eight thousand class as shown by table 7 had a larger number of pupils per teacher in the elementary schools than Charlevoix. Seymour in Indiana headed the list with 39.3 pupils per teacher. It is evident that in view of the present practice of eighteen cities that Charlevoix cannot increase the number of pupils per elementary teacher. Does Seymour with practically forty pupils per teacher in the elementary schools maintain a high standard of instruction as compared with Charlevoix who has thirty-two pupils per teacher? That question could only be proved by a survey of the instruction in the two places. However present practice in the cities chosen shows that a smaller number of pupils per teacher is the rule. Under similar conditions the quality of instruction will depend

somewhat upon the number of pupils per teacher. Universal standards in this matter have not been set, but present practice would place the maximum number of pupils per teacher in the elementary schools at about thirty. If there is any material increase in the population of the elementary schools of Charlevoix then it will have to spend more money, if it maintains its present standards of instruction.

Table 6

Number of instructors, average daily attendance, number of pupils per instructor, high school, elementary school, Charlevoix, 1912-13 to 1916-17 inclusive

Year	Number	Average	Number	Number	Average	Number
	High	Daily	Pupils	Teachers	Daily	Pupils
	School	Attendance	per	Element-	Attendance	per
	Teachers	High	Teacher	ary	Elementary	Teacher
		School	High	School	School	Elementary
			School			School
1912-13	5 2/3	110	19.4	11	355	32.3
1913-14	5 2/3	115	20.3	11	354	32.1
1914-15	5 2/3	117	20.6	11	335	30.5
1915-16	6 2/3	105	15.7	12	375	31.3
1916-17	6 2/3	103	15.4	12	376	31.3

Data from state reports for the various years.

Table 7

Number of Pupils per Teacher, in Average Daily Attendance,
In Elementary and Secondary Schools, and Rank, 17 Cities. 1915.

Cities	Number Pupils Per Teacher		Rank in Number of Pupils Per Teacher	
	Elementary School	High School	High School	El. School.
Indiana				
Connersville	35.9	23.1	13	16
Lebanon	28.8	21.5	10	5
Madison	34.8	19.2	8	15
Seymour	39.3	26.	16	17
Valpariso	32.3	19.4	7	10
Whiting	23.5	15.7	4	1
Illinois				
Beadstown	32.8	22.5	11	11
Belvidere	29.2	15.5	3	6
Charlestown	33.1	17.1	6	12
Edwardsville	34.8	20.5	9	14
Madison	30.4	12.3	1	13
Michigan				
Cheboygan	29.9	23.4	14	8
Mt. Clemens	28.3	16.8	5	4
Wisconsin				
Baraboo	27.5	22.7	12	3
Grand Rapids	32.2	14.3	2	9
Menominee	29.6	24.5	15	7
Neenah	25.7	31.7	17	2

Note: Table taken from United States Education Reports,
Compiled in School Costs Course U of C.

C. Expenditure for Supervision

The supervision in the school system of Charlevoix is done by the superintendent and the principal of the high school. There are no special supervisors at present in the system. During the first two years of the time covered by this thesis a special supervisor in music and drawing was employed. This service however was abandoned due to poor instruction secured. It was the opinion of the board of education that to secure efficient service in the supervision of drawing and music, a larger expenditure was necessary. In view of the rising costs of school administration, the expenditure of a large amount in this direction was deemed unwise, and since that time the subjects mentioned have developed with out supervision.

The superintendent gives practically two thirds of his time to supervision of the school instruction. This time is divided about equally between the secondary and the elementary departments of the school system.

The principal of the high school gives one third of his time to supervision. His work is entirely with the senior and junior high school. In the Charlevoix system, since the year 1916-17 the two types of high schools are housed in one building.

The reorganization of the system was of such recent origin that for the time discussed in this thesis, the school organization was considered on the traditional type, elementary school eight years, high school four years, In table eight is given the cost of supervision in the elementary and high school department of the Charlevoix system. The salaries of the superintendent and the principal have been pro rated.

Table 8

Cost of Supervision in Elementary and Secondary School, Five Years, Charlevoix.

Year	Elementary School	Secondary School
1912-13	\$837.33	\$986.83
1913-14	855.00	1019.16
1914-15	837.33	936.83
1915-16	904.00	1036.86
1916-17	533.33	833.53

D. Expenditure Measured in Comparable Terms

a. Amount spent per Inhabitant.

In making a study of school expenditures, a comparison with the school expenditures of other systems determines in some degree how well the system under consideration is meeting the present practice. There are several methods of comparison. Cities may be grouped according to population. Population in some measure should determine what provision a city should make, for the education of its youth. Cities of certain size should make about the same provision for education, as other cities of the same size.

In making a comparison of cities of about the same size, it is evident that the wealth of the city should play an important part. Many cities of the same population, are not equal in wealth. Cities of less wealth cannot be expected to make the same provision for education, as cities of greater wealth.

Geographical location affects the amount of money spent upon school systems. The different sections of United States have different standards concerning expenditures for education.

In making a comparison with the eighteen cities as shown in table 10 two conditions were taken into consideration. First the location and second the relative size of the cities. It would seem that from the standpoint of geographic location and population that Charlevoix and the eighteen cities are fairly comparable.

The determination on the sufficiency or insufficiency of school expenditure is difficult to determine. How much a city should spend per inhabitant or per pupil in average daily attendance has not been standardized. A comparison or evaluation with what is done in other cities is valuable information in determining whether a sufficient amount has been spent.

The material in table 9 gives information on the cost per inhabitant in Charlevoix during the past five years, beginning with the year 1912-13. During the five consecutive years the cost of education in Charlevoix per inhabitant was respectively \$10.04, \$9.09, \$9.69, \$9.66, \$9.79. It would thus appear that the cost of education per inhabitant in Charlevoix was exceptionally high. A comparison with table 10 reveals the fact that not one of the eighteen cities paid as much per inhabitant as education as Charlevoix. The highest cost per inhabitant as shown in table 10 was Menominee, which was \$8.62. Even for the lowest year of the five, 1915-16 the cost per inhabitant for education in Charlevoix was \$1.04 higher than the highest city in table 10. While the year in which the per inhabitant cost was the greatest in Charlevoix it was paying \$10.04 against

Menominee's \$8.62. The difference for that year was \$1.42 per inhabitant in favor of Charlevoix. This comparison would seem to indicate that Charlevoix was making a very favorable provision for public education as compared with the cities of from five to eight thousand population as shown in table 10.

b. Amount spent per pupil in average daily attendance.

In table 9 is shown the amount of money spent in Charlevoix for each pupil in average daily attendance. The respective amounts beginning with the year 1912-13 were \$58.34, \$52.37, \$59.22, \$54.33, \$54.82. A comparison with table 10 shows that only one city in the group of eighteen cities paid in excess of Charlevoix, for per pupil in average daily attendance. Whiting paid \$69.75 per pupil in average daily attendance. Whiting however was an exception, for the second city in the list is Valparaiso, and it paid only \$42.30 per pupil in average daily attendance. All other cities in the list of eighteen cities as shown in table 10 paid a smaller amount than Valparaiso for the same service. The lowest city in the list paid only \$23.80 per pupil in average daily attendance. Charlevoix paid in 1914-15, \$10.53 less per pupil in average daily attendance, than the highest amount paid for the same service in the list of eighteen cities. But this town was without doubt an exception, for none of the other towns came near spending as much for the same service as did Whiting. Valparaiso the second highest city as to expenditure for this type of service, paid \$10.07 less than the amount paid by Charlevoix during the poorest year of the five, and \$16.92 less in the highest year of the five.

Whether the amount spent per pupil in average daily attend-

ance is too ^{high} in Charlevoix would be difficult to determine. However it would appear that if all but one city, of the eighteen used for comparison spent a less amount for the same service, that Charlevoix could afford to investigate the cost per pupil in average daily attendance, and if possible without material injury to the system reduce its present high expenditure.

Table 9.

Total annual expenditure, expense per inhabitant, and expenditure per pupil in average daily attendance for school purposes. Charlevoix, Five Years.

Year	Population	Total Annual Expenditure	Expense per Inhabitant	Average Daily Attendance	Expenditure per pupil in Average Daily Attendance
1912-13	27000	\$27,131.55	10.04	465	\$58.34
1913-14	2700	24,565.20	9.09	469	52.37
1914-15	2700	26,174.95	9.69	442	59.22
1915-16	2700	26,082.64	9.66	480	54.33
1916-17	2700	26,260.25	9.79	479	54.82

Data: from treasurer of school board and from reports of State Superintendent for years shown.

Table 10

Expenditures for all school purposes Per Inhabitant and Per
Pupil in Average Daily Attendance in 18 Cities of Population
5000-8000

City	Popula- tion	Total Exp- enditure for all school Purposes	Expendit- ure per Inhabitant	Average Daily Attend- ance	Current Expend- iture per Pupil in Average Daily Attend- ance	Rank in Expend- iture per Inhab- itant	Rank in Expend- iture per Pupil in average attend- ance
Indiana							
Connersville	8189	45,842	5.60	1165	\$39.35	10	6
Labanon	5979	35,869	6.00	999	35.90	6	10
Madison	6483	35,418	5.46	1044	33.93	11	13
Seymour	6235	32,7000	5.24	1098	29.78	12	14
Valpariso	7341	43,839	5.97	1035	42.30	7	2
Whiting	7889	59,638	7.56	855	69.75	2	1
Illinois							
Beardstown	6747	31,169	4.62	1187	26.28	16	17
Belvidere	7411	47,339	6.39	1198	39.52	5	5
Charlestown	5482	29,560	4.86	850	34.79	15	12
Edwardsville	5443	28,422	5.22	1020	27.86	13	15
Litchfield	5998	23,612	3.94	992	23.80	17	18
Madison	6580	23,859	3.63	870	27.42	18	16
Michigan							
Cheboygan	7044	40,039	5.68	1054	37.99	9	8
Mt. Clemens	8372	40,543	4.98	1129	35.91	14	11
Wisconsin							
Baraboo	6611	37,763	5.71	960	39.34	8	7
Grand Rapids	7535	52,879	7.01	1256	42.03	4	3
Neenah	5624	40,935	7.28	995	41.14	3	4
Menominee	4627	39,872	8.62	1098	36.31	1	9

Expenditure per inhabitant for schools

(See Table 10)

18 cities and

Charleroi

Charleroi

B. Charlevoix County Normal an Item of Expense

The School District #1 Charlevoix City and Township, operates as a part of the school system a County Normal, known as the Charlevoix County Normal.

The Charlevoix County Normal, is organized under the laws of the State of Michigan, for the purpose of training teachers for the rural schools, The board of Education has entered into an agreement with the state to furnish instruction, together with proper equipment, including rooms and heat, for the Charlevoix County Normal, all of which must be to the satisfaction of the Superintendent of Public Instruction. The board of education is bound by agreement to include in the expense budget of the school district, such sums as maybe necessary for these purposes.

The State of Michigan allows the school district of Charlevoix \$500.00 for each teacher employed in the Charlevoix County Normal. However the total sum cannot exceed \$1000.00.

Each year the board of education estimates, before the first day of October the cost of instruction for the current year, in the Charlevoix County Normal. Deducts from this amount the \$1000.00 received from the State of Michigan, and reports the balance to the County Clerk of Charlevoix, Michigan. The Board of Supervisors then appropriates out of the general fund of the county, one-half of the amount shown by this report. However in no case is the amount of the appropriation by the county to exceed one-half of the amount appropriated by the state.

The cost for instruction, in the Charlevoix County Normal has varied, during the five years under discussion, from

\$1700.00 to \$1927.44. The employment of two instructors has been the rule. The change in cost of instruction has been due to various changes in the personnel of the County Normal faculty.

Table 11

Cost for Instruction, Charlevoix County Normal, for five years.

Year	Cost for Instruction.
1912-13	\$1885.00
1913-14	1905.00
1914-15	1904.94
1915-16	1927.44
1916-17	1700.00

Table 12

Charlevoix County's Share of Cost of Charlevoix County Normal, five years,

Year	Amount paid by Charlevoix County
1912-13	\$ 465.49
1913-14	505.97
1914-15	531.85
1915-16	539.85
1916-17	389.50

Talbe 13

Total cost and cost per graduate, Charlevoix County
Normal for five years.

Year	Total cost Charlevoix County Normal	Number of Graduates	Cost per Graduate
1912-13	\$1930.98	11	\$184.63
1913-14	2011.94	9	223.54
1914-15	2063.70	13	158.78
1915-16	2079.70	12	173.30
1916-17	1779.00	8	222.37

The total cost of the Charlevoix County Normal varied for the five years, from \$1779.94 in 1916-17 to \$2079.70 in 1915-16. The median cost being \$2011.94.

The cost of the Charlevoix County Normal, to Charlevoix County and since the board of education pays an equal amount it applies to that body equally, was in the neighborhood of \$500.00 per year. The Median for the five years being \$505.97.

Since the Charlevoix County Normal cost s the Charlevoix school district only about \$500.00 per year the continued operation of this institution seems to be a wise expenditure of money. Since the County Normal through its training room practically takes care of one grade in the school system, it saves the cost of another teacher, which under the present salary conditions would be an amount equal to the money now spent in maintaining the Charlevoix County Normal.

In addition to taking care of one grade in the system , the school system has a constant supply of teachers that may be

for substitutes, in various positions as the occasion demands. The Charlevoix County Normal also provides a means of higher education in Charlevoix, to those who wish to pursue their education beyond the high school. The work done in the Charlevoix County Normal is recognized in the state normals to the extent of eight credits.

During the five years considered in this thesis, the graduates from the Charlevoix County Normal were respectively 11, 9, 13, 12, 8. In table 13 the per capita cost for the Charlevoix County Normal is seen to range from \$223.54 in 1913-14 to \$158.74 in 1914-15, with a median per capita cost of \$184.63. This per capita cost is very much higher than the cost of education per pupil, in the Charlevoix public schools. The median in the later case is \$59.54. It is a striking example of how the cost per pupil is governed by the number of pupils being instructed. It is estimated by the state department that thirty per cent of the rural teacher, in Michigan, are graduates of the various county normals. The state evidently feels justified in this rather large expenditure, in order that the rural schools may be supplied with teachers.

Data from Superintendent's report and from the County Treasurer's books for the various years.

SECTION F.

In the following section a comparison has been made between the cost of various kinds of services in terms of average daily attendance. The comparison has been drawn between the cost of board of education and business office, superintendent's office, salaries of principals, educational supplies, wages of janitors, fuel, light and power, in Charlevoix and the cost of like services in towns of from five to eight thousand population situated in Indiana, Wisconsin, Illinois and Michigan. Such a comparison gives an opportunity to rank Charlevoix with the other cities as to expenditures for the services mentioned.

F. Expenditure for various services measured in terms of average daily attendance.

How is Charlevoix educating her pupils who actually attend school? What provision is being made for adequate education as to the amounts paid for, board of education and business offices, superintendent's office, salaries of principals, and salaries of teachers per pupil in average daily attendance. Tables 14 and 15 show the amount spent per pupil in average daily attendance for the above mentioned services.

a. Board of Education and Business Office.

A comparison of the data in table 15, with the data in table 14 shows that the highest amount paid for board of education and business offices was paid by Whiting, the amount being \$5.16. The median of the eighteen cities was \$.43. Charlevoix with a median of \$.35 compares favorably with the median of the eighteen cities.

In a system of size of Charlevoix a very small per cent of the total money spent would be given to board of education and business office. A large part of the duties that would naturally fall upon such an office in a large system, would in a small system be done in connection with other duties. For this reason no large amount would be spent for that kind of service.

b. Superintendent's Office.

Whiting paid \$3152 for superintendent's office, and the smallest amount paid by any of the eighteen cities was \$1.22. In comparison with this amount Charlevoix gave a median amount for the five years of \$1.39 per pupil in average daily attendance. The lack of uniformity in this expenditure was not as

large as would appear by the table. The condition of the accounts for the first two years of the five made it impossible to give exact data on this expenditure. The last three years were very uniform and are without doubt a fair sample of what was spent by Charlevoix for this type of service.

c. Salaries of principals

d. Salaries of teachers.

In respect to the amount paid for principals Charlevoix spends a large amount as compared with the eighteen cities of five to eight thousand population. Charlevoix's median was \$3.99 against \$1.28 for the eighteen cities. However such a comparison does not represent the true condition, for in Charlevoix the principals are also supervisors, and the amount spent would be governed by that condition. In the eighteen cities the supervisor and the principal would probably perform distinct services. While it is impossible to draw any definite conclusions owing to the condition above mentioned, yet it would seem as if this type of service was being well taken care of in Charlevoix .

In examining the expenditure for teacher's salaries per pupil in average daily attendance, an important expenditure is being studied. It is impossible to run an efficient school system with poor teachers. While high cost for teacher's salaries does not necessarily indicate high grade instruction, or low cost poor instruction, yet high cost and good instruction have a positive relation, as also low cost and poor instruction. Charlevoix median for the period of five years for salaries of teachers was \$39.23. This amount did not vary much for the five years taken as a basis. The highest amount paid in the eighteen

cities in the five to eight thousand class was \$32.22 and the lowest amount was \$16.98. The median for the eighteen cities was about four dollars above the lowest amount. Charlevoix is paying taking the median as a guide in the eighteen cities, a very high amount for salaries of teachers per pupil in average daily attendance. In fact the median amount spent by Charlevoix for salaries of teachers per pupil in average daily attendance was only about two dollars below the highest amount by any of the eighteen cities.

From a comparison of the expenditures per pupil in average daily attendance for, board of education and business office, superintendent's office, salaries of principals, and salaries of teachers, with the expenditures for like services in the eighteen cities, it has been shown that Charlevoix is meeting the expenditures of the cities in the five to eight thousand class to a marked degree.

Expenditures for Various Kinds of Services

Table 14

Total expenditure per pupils in average daily attendance for;
Board of Education and Business Office, Superintendent's Office
Salaries of Principals, Salaries of Teachers.

Year	Board of Edu- cation, Business office	Superin- tendent Office	Salaries of Principals	Salaries of Teachers
1912-13	.10	.07	3.92	28.69
1913-14	.11	.35	4.99	28.59
1914-15	.35	1.85	4.01	31.13
1915-16	.37	1.39	4.04	30.23
1916-17	.64	1.53	2.85	30.41

Table 15

Total expenditure per pupil in Average Daily Attendance for

Various Kinds of Services, in Cities 5000-8000, 1915

City	Board of Education Business Office	Superintend- ents Office	Salaries Supervisors	Salaries Principals	Salaries Teachers
Indiana					
Connerville	1.76		1.92		25.92
Lebanon	.15	2.00	3.54	1.49	22.88
Madison	.91	2.08	3.48	1.24	20.70
Seymour	.87	1.62	1.02		19.75
Valparaiso	.87		3.09	1.48	16.81
Whiting	3.16	3.52	2.25	6.69	32.22
Illinois					
Beardstown	.20	1.90			18.37
Belvidere	.25	1.87	1.09		25.32
Charleston	.28	2.41			22.65
Edwardsville	.24	2.23		.71	18.34
Litchfield		1.93		.41	16.98
Madison	.23	2.07	1.16	1.11	19.06
Michigan					
Cheboygan	.71	1.57		1.28	18.81
Mount Clemens	.33	2.08	1.15	2.52	19.72
Wisconsin					
Baraboo	.49	1.22		.26	25.44
Grand Rapids	.43	2.09		.67	25.34
Menominee	.50	2.09	1.28		19.48
Neenah	.89	2.48		.25	22.17

Total expenditure per pupil in average daily attendance for

Board
of
Education.

Salaries
of
Teachers.

18 Cities		Superin- tendents office	18 Cities	18 Cities
				16 81
.15				16 98
.20				18 34
.23		1 22	Charlottesville	18 37
.24		1 57	1 39	18 81
.25		1 82		19 06
.27		1 87		19 48
.28		1 90		19 72
.33	Charlottesville .35	2 00		19 75
.43		2 07		20 70
.49		2 08		22 17
.50		2 08		22 66
.71		2 07		22 88
.87		2 09		25 32
.89		2 23		25 34
.91		2 41		25 44
1 76		2 48		25 92
3 16		3 52		32 22
				30 43

e. Educational Supplies.

The education of the youth is a duty that belongs to every member of the community. Efficient instruction makes the children valuable assets to the community. Knowing the value of education the people should furnish everything needed to secure adequate education for the pupils in the public schools. However educational supplies are furnished in some school systems to a much larger degree than in others. The policy of a certain system may be to furnish complete equipment for education, including buildings, heat, light, instructors, text books, supplies etc. But in another system only certain portions of the total equipment is supplied such as buildings, light, heat, instruction, and the remaining part of the equipment such as text books, and educational supplies are purchased by those who are receiving the instruction. Such a variety of practice may be found in this matter that it is very difficult to make comparisons between cities.

Charlevoix furnishes all the paper of every type used in the elementary schools, and practically all the paper used in the High school. Pens, paste, and incidental equipment used by teachers and pupils are also furnished. This liberal policy in regard to educational supplies adopted by Charlevoix may account for it having a median expense for the five years of \$2.52 per pupil in average daily attendance, while the median for the eighteen cities was only \$1.98 and one city was paying only \$.15 for educational supplies per pupil in average daily attendance.

f. Wages of Janitors.

In this generation when great emphasis is placed upon

Sanitation the janitorial service is an important one. Tables 16 and 17 show the wages of janitors for Charlevoix and the eighteen cities. In Charlevoix the expenses ran, for the five years between \$3.08 and \$3.73 per pupil in average daily attendance. The cost for this service has decreased for the past five years. The median for Charlevoix for the five years was \$3.44. In case of the cities in the five to eight thousand class, the highest amount paid for janitorial service was \$7.10, the next highest was \$4.18. The median for the list of eighteen cities was \$2.84. In comparison with these amounts Charlevoix was spending a fair amount upon this type of service. The efficiency of this service in Charlevoix is discussed later in the thesis.

g. Fuel

The cost for fuel in the Charlevoix system was exceptionally high, per pupil in average daily attendance. In the eighteen cities the median for fuel was \$2.17, with a range of cost from \$4.43 to \$.33 per pupil in average daily attendance. The cost for the same service in Charlevoix varied from \$4.95 to \$2.69, while the median cost for the five years was \$3.08. Only two cities in the five to eight class as shown by table 17 paid in excess of Charlevoix's median. Why was Charlevoix paying such a large amount for fuel per pupil in average daily attendance? While the weather conditions in Northern Michigan are severe, and necessitate a fire during most seasons every school day, yet many of the towns used for comparison have similar conditions, and meet them with considerable less cost. The climatic conditions cannot fully explain the high fuel cost in Charlevoix.

On an examination of the Charlevoix school buildings were

found to be all poorly ventilate. In some of the buildings a system of ventilation was originally installed, but alterations in the buildings have destroyed practically all ventilation except that secured by the open window method, which is very wasteful of fuel. With the open window method it is impossible to regulate the amount of ventilation, each teacher uses her own judgement, and once the windows are open they are seldom closed until the end of the session. The results are that the firement are obliged to furnish an excessive amount of heat to keep the rooms at the proper temperature.

The excessive fuel cost is probably due in part also to the poor furnaces that furnish heat to the buildings of the system. Especially is this true of the furnace in the Union building, which furnishes heat to the Union building and to the high school. This furnace consumes about three-fourths of the total fuel used, and without doubt adds considerable to the high fuel cost. The board of education is during the present summer installing a new heating plant in the Union building, which it believes will greatly reduce the fuel cost. The operation of the new furnace during the coming year will help to determine the validity of one probable cause of the high cost of fuel in Charlevoix.

h. Light and Power.

Practically the only use of electric current in Charlevoix is for illumination purposes. The buildings are all equipped with electric lights for use on dark days and for school functions held in the evening.

Since Charlevoix has practically no scientific ventilating system, the cost for power with which to produce forced ventilation through the system is eliminated. Thus the small amount spent for light and power per pupil in average daily attendance was to be

expected. The highest amount spent during five years was \$.91, and the median was \$.48 per pupil in average daily attendance. Such a cost for light and power places Charlevoix in the lower half of the list of eighteen cities. More than half of the cities in the five to eight thousand class spent more than \$1.07 for light and power per pupil in average daily attendance.

Total expenditure per pupil in average daily attendance for

Educational
Supplies

Wages
^{of}
Janitors

Fuel

18
Cities

18
Cities

18
Cities

1 72

1 78

1 91

2 06

2 11

2 16

2 17

2 24

2 74

2 84

2 88

2 93

2 99

3 10

3 74

3 96

4 18

7 01

18
Cities

1 33

1 74

1 77

1 86

1 10

1 34

1 35

2 01

2 04

2 17

2 28

2 30

2 35

2 81

3 06

3 36

4 43

15

29

50

57

69

71

89

91

97

98

99

1 48

1 72

1 98

2 02

2 87

3 61

Charlevoix

2 32

Charlevoix

3 44

Charlevoix

3 08

Table 16

Total Expenditure per Pupil in Average Daily Attendance for Various Specific Kinds of Service.

Year	Educational Supplies	Wages of Janitors	Fuel	Light Power
1912-13	1.79	3.73	3.86	.42
1913-14	2.32	3.66	2.69	.43
1914-15	3.42	3.44	3.08	.48
1915-16	1.85	3.36	2.83	.61
1916-17	2.48	3.08	4.05	.91

Table 17

Total expenditure per Pupil in Average Daily Attendance for Various Kinds of Specific Services, 1915 Cities 5000-8000

City	Educational Supplies	Wages of Janitors	Fuel	Light Water
-Indiana-	.29	2.34	1.35	.69
Connersville				
Lebanon		2.16	2.04	1.32
Madison	.50	2.06	1.10	.45
Seymour	1.72	1.73	.86	1.09
Valparaiso	2.87	2.84	2.01	.82
Whiting	3.61	7.01	2.81	2.53
-Illinois-				
Beardstown	.69	2.17	.77	.29
Belvidere	.21	3.74	2.35	3.17
Charleston	1.98	2.99	1.34	
Edwardsville	.97	1.72	.33	
Litchfield	.15	1.91	.74	.24
Madison	.57	2.74		.53
-Michigan-				
Cheboygan	.99	2.82	2.20	1.21
Mount Clemens	.71	3.10	2.74	.62
-Wisconsin-				
Baraboo	.89	4.18	3.36	1.07
Grand Rapids	1.09	3.96	3.06	1.68
Menominee	2.02	2.11	4.43	.55
Neenah	1.46	2.93	2.28	1.66

SECTION G.

The current expenses of a school system are classed under four distinct heads, administration, supervision and instruction, operation, and maintenance. Unless a check is placed upon the disposition of the current expenses, one branch is likely to secure an undue amount of money.

The amounts spent for the various services are here discussed in terms of the daily average attendance. A comparison is drawn between the cost of these services in Charlevoix and in the eighteen comparable cities.

G. Current Expenditures for Various Kinds of Service
per pupil in Average Daily Attendance.

The efficiency of school finance is not determined by the amounts of the income, nor the amount spent upon any single item. The income must be wisely administered. Skill must be shown in the handling of the money. In the following discussion the amounts spent upon administration, supervision and instruction, operation, and maintenance will be discussed in terms of per pupil in average daily attendance.

a. Administration.

In a school system as in all business firms the administration of the work is an important service. The whole organization takes the tone of the administrative service. Institutions are what their administrations make them. The public is beginning to realize this fact, and today we find that higher salaries and better men are the rule in administrative school work. The boards of education have come to realize that it pays to administer the school efficiently. In table 19 the figures show that in the eighteen cities from five to eight thousand population that the range paid for administration per pupil in average daily attendance, was very large. In some cities it was as high as \$6.69 while in others it went as low as \$.87 per pupil in average daily attendance. Evidently there is not much uniformity of practice in this matter. Those cities who were close to the middle line were spending about \$2.27 for administration. Charlevoix paid a median amount for the five years of \$1.86 and this amount was increased in 1916-17 to \$2.11 for administration. Evidently this type of service is being given more attention in Charlevoix, from the fact that the superintendent who does most of this work is not required to teach, and can

Thereby give more attention to this type of service. However in comparing the data found in tables 19 and 21 it is evident that Charlevoix is spending a very low percent of the current expenditures for administration. Only one city in the list of eighteen paid a lower per cent for administration than Charlevoix, and the next lower city in the list paid 4.39 per cent as against Charlevoix's highest per cent of 3.78. In the examination of the per cent cost for administration for the five years in Charlevoix it is found that the per cents have increased, which shows that Charlevoix is realizing the importance of this type of service. Since this type of work is so important as shown in another connection, and in view of the amounts spent by other cities, it would seem wise for Charlevoix to increase the expenditure for administration. In Part 2 of this thesis the Charlevoix system is shown to be efficiently administered, under the present management, which would point to the fact that the school system pays too little for administration, and that if the present standards are maintained more money should be spent upon this type of service.

b. Supervision and Instruction.

Supervision and instruction is the pivot point of any school system. It is for this type of service that the other types are organized. If this type fails to perform efficiently its work then the other types of service are of little value. All types of school services should co-operate to make instruction a vital factor in the school system. The main aim of the school in instruction and closely allied with instruction is supervision. This type of service always received a large per cent of the total

amount spent for current expenditures. Table 18, 19, 20, and 21 show the amounts and per cents spent for this type of service. In regard to supervision and instruction for the five years the Charlevoix system gave this important branch of school service a median of \$30.05 and a median per cent of 60.83 per pupil in average daily attendance. The median in this regard represents very closely the amounts spent for each of the five years. In comparison with the annual amount spent per pupil for supervision and instruction Charlevoix compares favorably with the eighteen cities, but in regard to the per cent spent for this service Charlevoix is low as compared with the eighteen cities. In the five to eight thousand class cities the lowest per cent was 60., for supervision and instruction, which was close to the percent spent by Charlevoix for three years of the five, while the highest per cent was 78, and many of the cities in the list of eighteen paid above 70 per cent for supervision and instruction per pupil in average daily attendance. The tenure of office of the high school faculty, and the relatively low amounts paid to grade instructors, as discussed in another connection will help to explain this low per cent spent for supervision and instruction in Charlevoix. It would seem a wise administrative policy to increase the amount spent upon this service in view of its importance, and the practice of other cities for this type of service.

c. Operation.

The provision and care of property including the cost of work done by the janitors and other employees, cost of fuel, water, light and power, janitor's supplies etc, are essential to a well regulated school system. In Charlevoix

the management of the operation of the school plant is under the direction of the superintendent. From the previous discussion on the item of cost of fuel, it would seem probable that it would pay a large amount for the operation of the school plant. Also the janitor's supplies are liberal and of a type that makes for efficient service. The most modern methods of cleaning are employed such as the use of disinfectants, deodorants, floor oil, sweeping compounds in the operation of the school plant. Paper towels, liquid soap are also provided in sufficient quantity. Charlevoix is meeting the modern ideas of sanitation. Tables 18, 19, 20 and 21 show the comparison of Charlevoix with the eighteen cities for operating expense. Charlevoix paid a median for the for the five years of \$8.66 and a median per cent of 15.55 per pupil in average daily attendance. This record compared with the cities of the 5000-8000 class shows that only two cities in that class exceeded the amount spent per pupil in average daily attendance, and in reference to the per cent expenditure for operation Charlevoix was well in the middle of the list of the eighteen cities. However in view of the results obtained by Charlevoix the expense seems justified.

e. Maintenance

The modern school building and the equipment such as blackboards, chairs, desks, etc., are supposed to last a considerable length of time. However it is found that each year money must be expended to maintain the school plant. Old equipment must be replaced by new and more modern educational apparatus. The buildings must be repaired and the grounds placed in a more attractive condition.

In the five years covered in this discussion Charlevoix,

has made a special effort to maintain the schools better than in the past. Especially is this true as to interior decorating and the beautifying the school grounds. Great improvement in the past five years has been made along these lines. Tables 18, 19, 20 and 21 show the expenditure for Charlevoix and the eighteen cities used as a comparison. Charlevoix's median for maintenance was \$4.52. per pupil in average daily attendance, and the per cent was 7.52. In comparison with the eighteen cities only two cities of the 5000-8000 class paid above the amount spent by Charlevoix for maintenance for per pupil in average daily attendance. In the percent of expenditure for maintenance Charlevoix exceeded a little the middle mark of the eighteen cities.

Table 18.

Current Expenditures per pupil in average Daily Attendance
for principal kinds of Service. Charlevoix.

Year	Administration	Supervision and Instruction	Operation	Maintenance
1912-13	1.11	28.67	9.74	1.83
1913-14	1.41	28.58	8.26	1.40
1914-15	1.98	31.18	7.93	4.45
1915-16	1.86	30.05	8.66	4.43
1916-17	2.11	30.42	10.29	1.63

Table 19.

Per Cent of Expenditure (Current) Devoted to principal kinds of
Service. (Reading Same as Above.)

1912-13	1.13	54.09	13.97	1.82
1913-14	2.70	60.83	15.77	2.68
1914-15	2.52	56.78	13.73	7.52
1915-16	3.43	60.92	15.55	7.94
1916-17	3.78	63.49	15.90	26.28

Table 20.

Current expenditures per Pupil in Average Daily Attendance, for
Principal Kinds of Educational Service. 18 cities, Population
5000-8000, 1915.

City	Administration	Supervision & Instruction	Operation	Maintenance
Indiana				
Connersville	1.76	28.27	4.36	4.10
Lebanon	2.15	28.05	5.53	
Madison	2.99	26.11	3.61	1.02
Seymour	2.09	22.49	3.37	1.00
Valpariso	.87	23.62	5.36	12.33
Whiting	6.68	46.23	12.36	4.86
Illinois				
Beardstown	2.10	19.09	3.22	1.83
Belevidere	2.12	27.32	6.91	3.16
Charlestown	2.69	24.64	5.33	2.00
Edwardsville	2.47	20.01	3.08	2.19
Litchfield	1.93	17.61	2.47	1.71
Madison	2.30	19.75	4.01	1.08
Michigan				
Cheboygan	2.27	22.19	6.39	2.76
Mount Clemens	2.41	24.28	5.89	2.66
Wisconsin				
Baraboo	1.71	27.33	8.61	1.31
Grand Rapids	2.52	27.10	8.70	3.14
Menominee	2.60	22.78	7.07	2.01
Neenah	3.37	24.35	6.87	5.21

Table 21.

Per Cent of Expenditures (Current) Devoted to Principal Kinds
of Educational Service. 18 Cities . Population 75000-8000.

City	Administration	Supervision & Instruction.	Operation	Maintenance
Indiana				
Connersville	4.57	73.41	11.38	10.64
Lebanon	6.02	78.50	15.48	
Madison	8.87	77.41	10.70	3.02
Seymour	7.14	76.71	12.73	3.42
Valpariso	2.06	60.00	12.71	29.23
Whiting	9.64	66.68	17.83	5.85
Illinois				
Beardstown	8.01	72.73	12.28	6.98
Belvidere	5.37	69.13	17.48	8.01
Charleston	7.75	71.10	15.38	5.76
Edwardsville	8.90	72.12	11.09	7.89
Litchfield	8.12	74.22	10.43	7.22
Madison	8.47	72.78	14.78	3.98
Michigan				
Cheboygan	6.76	66.02	19.00	8.22
Mount Clemens	6.85	68.89	16.73	7.54
Wisconsin				
Baraboo	4.39	70.14	22.09	73.37
Grand Rapids	6.08	65.36	20.98	7.57
Menominee	7.53	66.11	20.52	5.83
Neenah	8.47	61.18	17.25	13.10

H. Total Expenditures for Business and Educational Purposes.

How does Charlevoix distribute its current expenditures?

The current expenditures are divided into two main divisions, first the expenditures for business and second the expenditures for educational purposes. Every educational problem is on complete analysis a financial problem. The board members must decide how much is to be spent upon the various phases of school work.

The Educational expenditures include the cost of, superintendent's office, salaries and expenses of principals and teachers, stationery and other educational expense. The business expenditures include the cost of; board of education, wages of janitors, operation and maintenance. The first group applies to instruction primarily, while the second group is significant only as it directly applies to education. What has been the distribution of money for these services? Has Charlevoix given greater emphasis to one phase than another.

Table 22 shows the total amount spent for business in Charlevoix during the five years. The amount spent was rather uniform the median being \$9,296.20. In table 23 this amount was shown to be about thirty five per cent of the total amount spent for current expenses. This per cent was very high compared with the per cent spent by the eighteen cities. Only one city exceeded this per cent, and many cities spent around twenty per cent or more fifth, as against Charlevoix's one third, of the current expenses for business. If Charlevoix is to expend this large amount for business, then the results should justify the expenditure. If Charlevoix spends \$19.41 per pupil in average daily attendance for business, which is a large amount in comparison with the

amount spent by the eighteen cities, then either educational advantages should result or some of the money spent for business should be transferred to the educational activities. Charlevoix's business activities as shown by part two of this thesis seem to be well administered, so that the chances are the high cost for business is justified, because it makes a strong educational system.

The educational expenditures in Charlevoix as shown by table 22 varied slightly for the five years. The median for this expenditure was \$16,498.00. The education expenditures used in Charlevoix about sixty per cent of the total revenue for current expenses. The per cent spent for educational purposes in Charlevoix was very low as compared to the per cents spent by the cities in the five to eight thousand class. Nearly half of these cities were paying around eighty per cent of the current expenditure for educational purposes. Only two cities in the list of eighteen could be classed with Charlevoix as to the per cent spent for educational purposes. Since a large portion of the amount of money spent for educational services is spent for salaries of teachers and supervisors, Charlevoix is either securing exceptionally good service at a low figure, or the cost for teachers and supervisors is low and the instruction is inefficient. In another connection, the fact that Charlevoix has no special supervisors was mentioned. This without doubt will partially explain the low per cent paid for educational purposes. Relatively low salaries for teachers is another cause for the low per cent of expenditure for educational purposes. However the amount spent for educational service should be ~~grr~~ a matter for serious consideration by the adminis-

trative authorities. If the low amount spent for educational purposes gives efficient instruction then it is sufficient, but on the other hand inefficient instruction is the result then the amount and the per cent of the expenditure for educational purposes should be increased. A survey of the instruction in Charlevoix would be necessary to determine the amount to be expended upon educational activities.

By an examination of tables 24 and 25 the figures show that Charlevoix is paying a large amount per pupil in average daily attendance for both instructional and business purposes, as compared with the cities in the five to eight thousand class. Only two cities of the eighteen came near paying as much for educational purposes, per pupil in average daily attendance as Charlevoix. The cost for business purposes was also large per pupil in average daily attendance, in Charlevoix as compared with expenditure for the same service in the eighteen cities. The cause for this large expenditure for educational and business purposes, may be partly explained by the fact that Charlevoix, especially in its high school had a small number of pupils per teacher. It would seem that a larger number of pupils could be educated in Charlevoix without materially increasing the cost of the school system, The increase in the number of pupils would decrease the cost per pupil in average attendance, provided the increase was not to the numbers that would make necessary added expenditures. However it would seem that a large per pupil cost is inherent in a small school system.

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Table 22

Showing Total Expenditure for Business and Education, Charlevoix.
Five years.

Year	Total expenditure for Education	Total Expenditure for Business.
1912-13	14,072.56	13,059.99
1913-14	16,213.03	8,352.16
1914-15	16,499.00	9,676.95
1915-16	17,081.68	9,000.96
1916-17	17,964.03	9,296.20

Table 23

Comparison of Total Per Cent, of all Current Expenditures, Devoted
to educational and Business Purposes, Charlevoix, Five years.

Year-	Per Cent Current Expenditures, Educa- tional purposes.	Per Cent Current Expenditures business Purposes
1912-13	51.8	48.1
1913-14	66.	33.9
1914-15	63.1	36.9
1915-16	65.5	34.4
1916-17	65.9	34.1

Table 24

Comparison of Current Expenditures per Pupil in Average Daily
Attendance, for all education & Business Purposes Charlevoix, 5 Years.

Year	Educational Purposes	Business Purposes.
1912-13	\$33.41	28.08
1913-14	34.57	17.81
1914-15	37.32	21.89
1915-16	35.58	18.75
1916-17	37.50	19.41

Table 25.

Comparison of Current Expenditures per Pupil in Average Daily Attendance, for all Educational, and all Business Purposes, 18 Cities of 5000-8000 Population.

City	Expenditures per Pupil in Average Daily Attendance.	
	Educational Purposes	Business Purposes.
Indiana	\$28.27	\$10.24
Lebanon	30.05	5.68
Madison	28.19	5.54
Seymour	24.32	5.01
Valpariso	23.62	18.56
Whiting	49.75	19.57
Illinois		
Beardstown	20.99	5.26
Belvidere	29.19	10.32
Charles Town	27.05	7.50
Edwardsville	22.24	5.51
Litchfield	19.54	4.19
Madison	21.81	5.32
Michigan		
Cheboygan	23.76	9.86
Mount Clemens	26.36	8.88
Wisconsin		
Baraboo	28.56	10.41
Grand Rapids	29.18	12.27
Meniminee	24.88	9.58
Neeah	26.83	12.97

Comparison of Total Per Cent of All Current Expenditures,
Devoted to Educational and Business Purposes, 18 Cities of
5000-8000 Population, 1915.

City	Per Cent of All Current Expenditures Devoted to	
	Educational Purposes	Business Purposes.
Indiana	73.41	36.57
Connersville		
Lebanon	84.10	15.90
Madison	83.60	16.40
Seymour	82.93	17.07
Valpariso	56.00	44.00
Whiting	71.77	28.23
Illinois		
Beardstown	80.00	20.00
Belvidere	73.88	26.12
Charleston	78.07	21.93
Edwardsville	80.14	19.86
Litchfield	82.34	17.66
Madison	80.40	19.60
Michigan		
Cheboygan	70.70	29.30
Mount Clemens	74.79	25.21
Wisconsin		
Baraboo	73.29	26.71
Grand Rapids	70.40	29.60
Menominee	72.20	27.80
Neenah	67.42	32.58

Per cent of all current expenditures devoted to:-

Educational
purposes

Business
purposes.

18
Cities

56 00

Charleroi

67 42

65 50

70 40

70 70

71 77

72 20

73 29

73 41

73 88

74 79

78 07

80 00

80 14

80 40

82 34

82 93

83 60

84 10

18
Cities

15 90

16 40

17 07

17 66

19 60

19 86

20 00

21 93

25 21

26 12

26 57

26 71

27 50

28 30

29 30

29 60

32 58

44 00

Charleroi

34 10

Expenditure per pupil in average daily attendance

Educational purposes

18 Cities
19 54
20 99
21 81
22 24
23 62
23 76
24 32
24 88
26 36
26 83
27 05
28 19
28 27
28 56
29 18
29 19
30 05
49 75

Charlevoix

35 58

Business purposes

18 Cities
4 19
5 01
5 26
5 32
5 51
5 54
5 68
7 60
8 88
9 58
9 86
10 24
10 32
10 41
12 27
12 97
18 56
19 57

Charlevoix

19 41

I. Total receipts and expenditures.

The receipts from all sources for District No.1 Charlevoix City and Township are shown in table 27. The largest amount during the five years was in 1912-13, when the total receipts were \$27,686.25. The lowest amount was the following year, it being \$24,702.33. The gain in the total receipts has not been very great in the five years. If the conditions were not static in Charlevoix the supply of money received from year to year would not meet the educational needs.

However table 27 shows that the disbursements have been just equal to the receipts. A very small balance has remained at the end of each year. But such a close margin between the expenditures and the receipts shows that the money secured each year from the various sources has been used to maintain the administration of the school system. The balances do not provide for any increase in the present activities of the school system.

The figures in table 28 give an idea of the increase in the valuation of the Charlevoix school district. It demonstrates that the increase in valuation has been very uniform and slow. At present the rate of taxation Charlevoix is supporting the school system at about the rate of \$7.35 per thousand dollars of assessed valuation.

The people of Charlevoix have not made any complaint about the taxation to the board of education up to the present time. Just how far the board of education could raise the mill rate, on the taxable property, and thus secure more money, with which to enlarge the present scope of the school system is a matter of conjecture.

Without doubt an increase in the tax rate will be demanded in the immediate future to meet the ever growing needs of a more diversified curriculum, and to meet the increased cost of instructional service. The board of education can test the temper of the people, for it seems quite certain the increased amount due to an enlargement of the valuation of the district will not take care of the added expense, brought about by a more diversified curriculum.

Table 27

Table showing the Total Receipts and Total Disbursements, and Balances, for five years. Charlevoix.

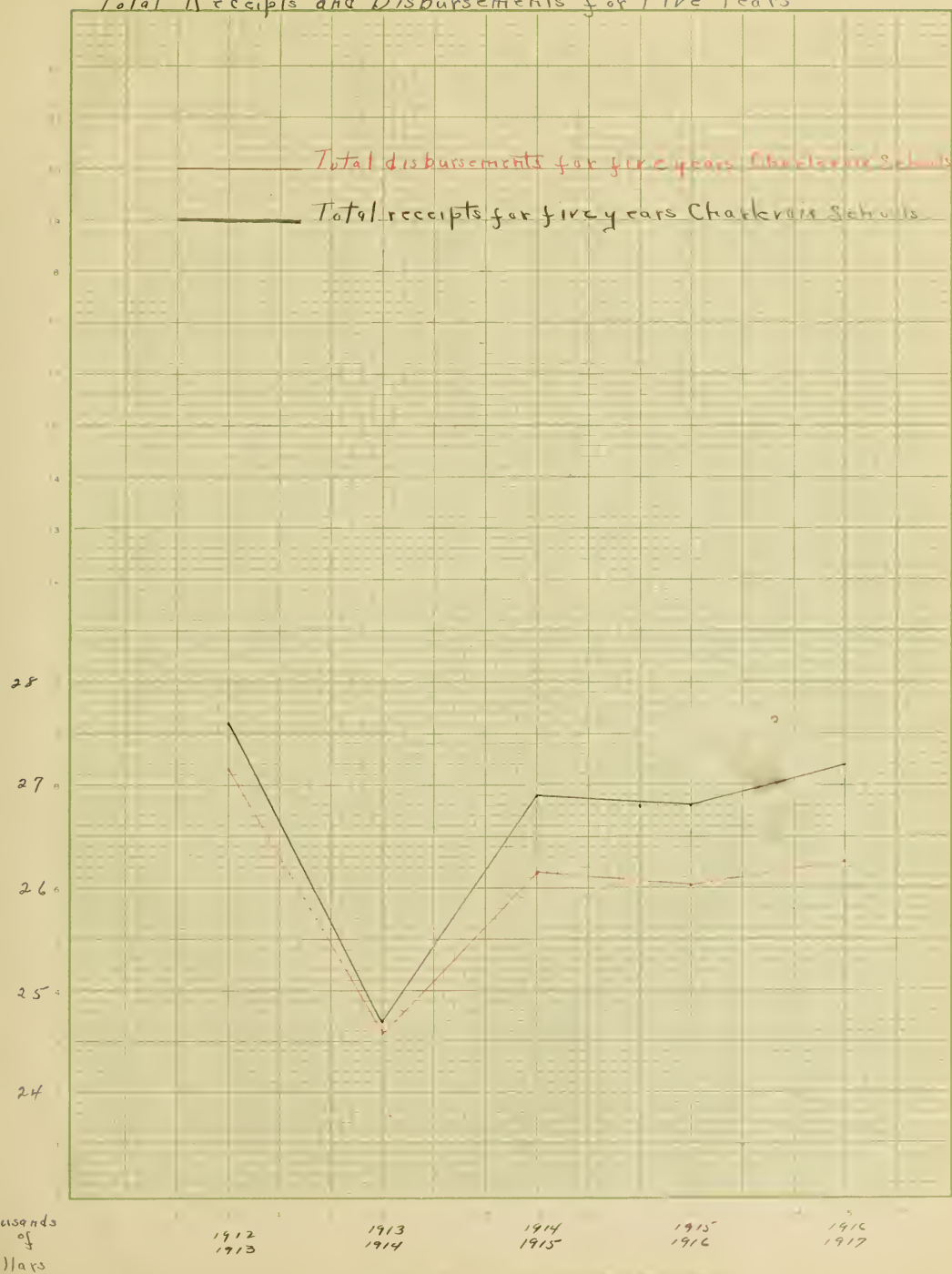
Year	Total Receipts	Total Disbursements	Balances.
1912-13	\$27,686.25	27,131.55	\$554.70 \$554.70
1913-14	24,702.33	24,565.20	136.63
1914-15	26,892.36	26,174.94	767.41
1915-16	26,853.29	26,082.64	770.65
1916-17	27,193.87	26,260.23	932.64

Table 28.

Table showing the Total Assessed Valuation of Charlevoix, Total Amount Received from Taxation, Number of Dollars per 1000 dollars valuation. Charlevoix.

Year	Total Assessed Valuation of District	Total Received From Taxation	Number of Dollars per 1000 Dollars Valuation.
1912-13	\$2,457,760	\$24,390.30	\$9.92
1913-14	2,491,145	18,329.09	7.35
1914-15	2,584,840	20,493.05	7.92
1915-16	2,598,215	18,169.47	6.95
1916-17	2,640,815	18,418.51	6.97

Total Receipts and Disbursements for Five Years



J. Summary.

In the discussion of the Cost and Management of the Public Schools of Charlevoix, Michigan, I have brought out the facts in reference to the main sources of revenue. From these sources of revenue the money ~~is~~ is secured to maintain the Charlevoix public school system, in all its various details. The sources of revenue are an important problem in the investigation of any school system. In the examination of these sources I have determined something of the ability of the school system to secure the proper amount of money for the education of the youth of the city of Charlevoix. In the study of these conditions for a series of years., I determined the rate of growth, and have attempted to predict in some measure the events of the future.

In connection with the discussion of the sources of revenue, the amounts that have been obtained as revenue for the school system of Charlevoix for the five years under discussion, have also been secured. A knowled~~ge~~ge of the amounts received, for a series of years, made possible the comparison with the revenue of other places similarly located, and in some measure to determine the manner in which Charlevoix has met the present practice of school expenditure.

Such a comparison as mentioned above, has shown that in Charlevoix the conditions are very static. The revenue from all sources was very constant for the five years covered by the investigation. Charlevoix has not grown, and the amount of money with which to run the schools has not materially increased,

Nor can the people of Charlevoix hope to secure through an increase in the assessed valuation of either the city of Charlevoix or the township of Charlevoix, a much larger amount of money, than at present is being secured.

Neither will the primary money received from the state of Michigan be greatly increased, as this amount depends directly upon the growth of the school population. The amount received from the state has been very constant and bids fair to remain at about the same level.

Charlevoix is now crowding its teachers, in respect to the number of pupils per teacher. In comparison with the eighteen cities, Charlevoix stands seventh in secondary schools, and thirteenth in elementary schools, as regards the number of pupils per teacher, in average daily attendance. Charlevoix is offering a diversified course of study in the high school, and by such methods is increasing the cost per pupil materially. The fact that Charlevoix is on the North Central list would show that it is attempting to meet standards that are not within the reach of the average small school.

In comparison with the eighteen cities Charlevoix's cost per pupil in average daily attendance is exceptionally high. In fact a town of the size of Charlevoix could hardly be expected to make equal provision with towns of about twice the size. However the reverse is the actual conditions. Charlevoix is paying more per pupil in average daily attendance than all but one of the cities in the 5000-8000 class. A discussion of the probable cause of this high rate can be found in the main discussion.

The amounts spent for various principal kinds of service per pupil in average daily attendance, places Charlevoix well up in the list of eighteen cities of from five to eight thousand-population. In fact these expenditures seem to be higher than could be expected of a city the size of Charlevoix. It was however pointed out that in small schools, where they attempt to give the best opportunity to all the students, by offering a diversified course of study that the cost per pupil in average attendance would be very ~~high~~, high, because of the relatively few people who could be served. Thus in the investigation the facts show that Charlevoix is paying a high amount for salaries, for educational supplies, for janitor service, and for fuel, per pupil in average daily attendance, as compared with the cities from five to eight thousand population.

But upon the broader lines of administration, supervision and instruction, operation and maintenance, Charlevoix is spending a low or average amount, as compared with the cities from five to eight thousand.

The percentage spent upon the business side of school administration is large in Charlevoix. On the other hand the amount spent upon the instruction side is too small. Charlevoix is evidently making more of the business administration than it is of the educational side of school work. It would seem that more money could be spent upon the latter service. The organization of the business activities seem to be well organized, and should secure efficient results.

K. Recommendations.

Recommended that more money be spent upon the salaries of both elementary and high school teachers.

Recommended that the course of study be investigated with a view to determining the work that is being done.

Recommended that if possible that some changes be made so as to decrease the cost per pupil in average daily attendance.

Recommended that the educational side of school administration be given more attention.

Recommended that the business side of school administration be examined to determine, if the money spent in this type of service is wisely expended.

Part II.

I. Business Management

A. Election of board of education.

The law provided that in the case of Charlevoix that the board of education shall be five in number, one to be elected for a term of one year, two for a term of two years, and two for a term of three years, and annually thereafter, a successor or successors, to the members or member, whose term of office expire.

This method of election makes it impossible for the total number of board of education to be new at one election. If we consider the probability of the old members being elected again, the method nearly always make a majority of the board of education old members with some experience. This method provides for a general policy to be adopted, and for the breaking in of new members.

B. Organization of the board of education.

From a legal standpoint the board of education has full control of the Charlevoix school system; both from the business and educational standpoint. It is important however in this day of specialization to determine just how far the board of education administers the school activities, and how far they delegate their work to others who are trained in the special fields of school activities.

In 1914-15 the board of education entered upon its minutes the resolution in the form of a motion, that the board of education should be divided into the following committees; education buildings and repairs, and finance. The exact number of men that should be placed upon the several committees was not stated. However it has been the usual custom to place two men on each committee.

While these committees still exist it is more and more the unwritten policy of the board of education, to delegate as much of the school administration as possible to the superintendent. The buying of all supplies for the buildings, both educational and janitorial is the work of the present superintendent. The bills for these goods are presented to the board of education with the signature of the superintendent, and are paid from the several funds. Just how far this process might be carried on has never been tested. The board of education will probably continue the policy as long as they have confidence in the administrative ability of the superintendent.

In the larger matters of expenditures such as the purchase of fuel or extensive repairs or large capital outlay, the problem at hand is presented to the board of education, and sealed bids together with specification, are secured for the service to be rendered. The problem is then discussed by the board of education, and the question decided by a majority vote of the board. By this method it is impossible for any one member of the board to exercise any great degree of authority without the consent of the other members.

This division of the work, gives the superintendent power to control those purchases, in which he ^{is} most vitally interested. It is thus possible for him to secure the proper educational and janitorial supplies, with which to run the school efficiently. In the larger matters of repairs and purchases, he is also given a chance to express his ideas, as to their value to the school system.

a. Superintendent as a business manager.

In Charlevoix the superintendent is not required to teach. This arrangement gives him sufficient time for his administrative work. Such a practice makes the superintendent as far as practical purposes are concerned the business manager of the school system. The school board is unanimous in supporting this policy. It is its opinion that better work can be done than if each member of the board of education exercised all the rights that are given by law. In this regard the board of education is in the advance of the general practice, in town of the size of Charlevoix. It is a common occurrence for the board of education to assume the administration of the school system, in all its details. Under such condition the superintendent is used as a clerk without power to administer or command obedience. Where such conditions exist a clash is bound to occur between the dual administrative agents. Such a system cannot hold men long in administrative positions. Frequent changes are sure to occur under the conditions mentioned.

C. Clerical help of the Board of Education.

The clerical work of the board of education is done in the superintendent's office, by clerical help supervised by the superintendent. Here all bills are checked and in case of mistake the correct amounts are determined. In case the bill calls for payment of services, that does not come under the work assigned to the superintendent the bill is left for the proper committee. Some years this clerical help is advanced students from the high school commercial department, and at other times it may be a trained stenographer that gives part time to this work.

2. Financial problems of Charlevoix

A. Power of board of education to tax.

The school tax ~~is~~ voted each year is the main source of revenue as has been shown in part I of this thesis. The board of education is informed by the assessing officer of both the city and township of Charlevoix, before the first day of July of each year, ~~as~~ to the amount of real and personal property as assessed on their several rolls. After this report is made the rolls cannot be changed, except by the Board of Tax Commission.

The board of education reports to the township and to the City Clerk, on or before the first day of October, showing the percentage of taxes to be levied for all school purposes. It then becomes the duty of the supervisors of the township of Char levoix and of the city of Charlevoix to spread upon their rolls the amount of school tax, as shown by the reports of the board of education.

The board of education shall estimate and vote the amount of tax necessary; in addition to other school funds, for fuel, for teachers wages, and incidental expenses, for the ensuing year, and when the voters fail or neglect the same to estimate and vote the amount of tax necessary for salaries of officers and servants.

B. Collection of Money.

Taxes for school purposes so assessed and levied, are collected by the township and the city respectively, and then paid to the school district, upon a warrant of the secretary, in favor of the treasurer. All delinquent school taxes of the school district are

collected by the county treasurer or the Auditor General. These are reported and paid to the treasurer of the school district.

3. School Buildings.

A. Operation.

a. Janitorial service.

The operation of the school buildings are under the control of the superintendent. The janitors and fireman are under his control also. They are responsible to him for their work and for such instruction as may be necessary. The superintendent dispenses with their services at any time when their services are not profitable.

In a small system it is impossible to secure trained men in the position of janitors. The superintendent secures the best men possible, for the positions. In the smaller ward buildings it has been possible to secure a near by resident for janitorial work. In these buildings the janitor also serves as fireman.

The two other buildings of the system are situated close together and are heated from a central heating plant which is in the Union Building. In the Union building the janitor takes care of the sweeping and similiar services besides firing for the Union and high school buildings.

In the high school building the work for the past few years has been done entirely by student help. Student janitorial help seems to be very efficient.

All rooms are supposed to be swept once a day. Sweeping compound is used to keep down the dust, and oil dusters are used on the furniture. About once a month all the desks are washed with a mixture of water and disinfectant to remove all germs if possible. Mopping in all the buildings is done about three times a year. This work is done by student help who are supervised by the regular

janitors.

The salaries of the janitors are not dependent upon any fixed scale such as the number of rooms, or the number of square feet of floor space, In the Union building, where the janitor is also fireman he received \$65 per month and house rent. The total is above \$75 per month. Estimating the firing and the janitorial services about equal, he received \$37.50 for each service per month. The janitors in the two ward building receive \$20 per month each. The high school janitor receives \$30 per month. The salaries of the janitors range from \$2.72 to \$3.40 per month per room.

b. Upkeep of grounds.

All janitors except the high school janitor, also have charge of the grounds. The lawns do not need much attention until the pressing need for fires has gone, therefore the work on the lawns is substituted for the firing work.

c. Distribution of educational and janitorial supplies.

All supplies for the school system are handled through the janitor of the Union building, to the janitors of the various buildings. Educational supplies are ordered weekly by the teachers through the janitor of the various buildings. No account of the supplies used by the various buildings is kept. Supplies are ~~gum~~ bought practically a year in advance. Quotations and bids are secured upon the materials used, but no attempt has been made to standardize the supplies.

d. Coal.

Coal is purchased by the Board of education in april for the following year. This fuel is secured through the local dealers by sealed bids. Soft coal is the type used in all the school

buildings of the system. The bids state the grade, price and time of delivery. No attempt to date has been made to determine the combustion value of the various grades that are offered for purchase. On the average about two hundred and fifty tons are purchased during the month of April, and delivered before the close of the school year. This is not a year's supply but it lasts until February or March. The capacities of the bins is the only thing that prevents a years supply from being on hand at the beginning of each school year.

B. Maintenance.

a. Minor repairs.

All current minor repairs are done through the janitorial service, under the supervision of the superintendent. These repairs are quire easily handled through this source.

b. Summer repairs.

The summer repairs are under the control of the buildings and repairs committee of the board of education. This work is generally done by contract, with specifications. The work has been very satisfactory in most cases.

4. Summary.

Ch rlevoix public school administrators, in managing the school system, have caught the modern trend of the industrial organization. While legally the board of education could administer the activities of the schools, yet they delegate their duties to others who have made the educational and business side of school administration a subject of special study. By employing a superintendent that is for all purposes concerned the business manager of the school system, they have a system in which there is considerable unity. In case the work does not progress, it is possible

to locate the cause and place the blame.

The superintendent is the logical person, in a small school system to control the smaller details of the operation of the school plant. The board of education does not have the time to devote to smaller matters of school administration. Each member of the board has work of his own that demands his attention. Most of the members of the board of education are willing to give the people of the community, the benefit of their experience, in the matters of general policy, far further than that they are unwilling to serve. If such is not the case, their services are under most conditions not of value to the school district.

In case of janitorial service, the average board of education does not fully understand the duties of the people in this class of service. They are too far removed from the work to know the supplies that are required. The demands of this type are still changing, and they cannot afford to be familiar with the most modern methods, because of the time that would be taken from their regular vocations. Even if they could keep abreast of the times, in matters of method, it would be almost impossible to secure the operation of the best results in the schools. Because of the limited amount of time they could spend with the janitors in putting these methods into operation. Again the Janitor and the board are too far removed from each other, to secure the best of co-operation.

The superintendent on the other hand is in close touch with the needs of the school. In the administration of his office it is possible for him to keep in contact with the best of practices, and thereby make the janitorial work of a superior kind.

If this type of work is under the supervision of the superintendent
supervision of the super.

a better co-operation can be secured. The close touch between the teachers on the one hand and the janitor on the other, makes a close co-ordination here possible. By this method the teachers can secure the needed changes, for more effective instruction, and the superintendent as a result of his administrative power can see to it that the changes are secured. Thus in many cases the school work is able to move with greater freedom, than would be the case, if the board of education administered the work of the janitorial staff.

This is not only of benefit to the school, but it is of equal benefit to the janitors. In Charlevoix the janitors have only one person to receive orders from, and are thus free from the many boss problems that would arise, if the management of this service was under the supervision of the board of education. Again the janitor can secure a closer contact with the superintendent than he could with the board of education, and thus the work is generally done with greater dispatch.

In the making of minor repairs, which are very often important greater efficiency can be secured,. If the changes needed are reported by teachers, or by the janitors themselves the work is given immediate attention. If the work is to be done by the janitors, it is reported to him. In case the work needs more expert workman, arrangements can be made for such work to be done in the near future. In any case the repairs are made with more speed, than could be possible, if these matters were left to some member of the Board of education.

The ordering of educational supplies is a detailed proposition, in which the co-operation of the teachers and the janitors should play an important part. These people together with the

superintendent have the best knowledge of what is needed. It seems then good policy to allow the superintendent, to have full controll of these supplies. Such a plan is carried on in Charlevoix, and is found to work to the satisfaction of all concerned. The distribution of these supplies is done very efficiently, thro most concerned, and thro the janitor of the Union Building who has complete knowledge of these supplies.

The larger matters of repairs, and capital outlays are well handled through the board of education committees. In most of these cases a large expenditure of money is involved, and a general policy is involved. It seems proper that such work should be done by the board of education, in small systems.

Recommendations.

1. Recommended that the board of education require at least a monthly report from the superintendent as to the reaspir work done, and repair work contemplated.
2. Recommended that the business administration of the Charlevoix School system be investigated, to try and determine if a reduction in its cost might be effected, without decreasing the present efficiency.
3. Recommended that the payment for janitorial services be put upon a standard basis, in order that comparisons may be made with other school systems.
- 4/ Recommended that a more complete standardization of supplies be worked out, in order to secure greater uniformity.

5. Recommended that an account be kept of the supplies used in each building, and if possible for each grade in the elementary schools, and each department in the high school.
6. Recommended that the purchase of fuel be made only after combustion tests have been secured.
7. Recommended that the board of education require a report of all committees, upon the completion of any work done under their supervision. This report to contain the cost of work at completion, as compared with the estimates given, or the contracts entered into.

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