

A COMPARISON OF THE COSTS OF OPERATION ON A
PER PUPIL BASIS FOR THE DIFFERENT TYPES
OF HIGH SCHOOLS IN KANSAS

A THESIS

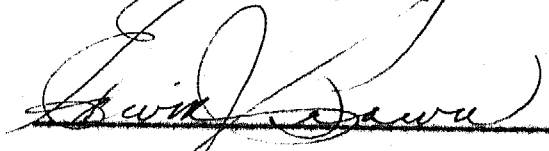
SUBMITTED TO THE DEPARTMENT OF
EDUCATION AND THE GRADUATE COUNCIL OF THE KANSAS STATE
TEACHERS COLLEGE OF EMPORIA IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

By

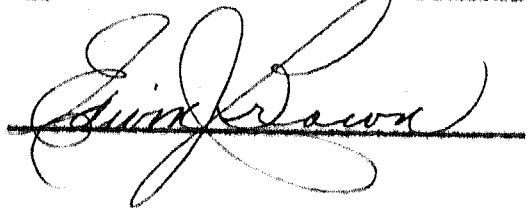
JOE FLEMING

July 1938

Approved for the Major Department



Approved for the Graduate Council



ix

82692

ACKNOWLEDGMENT

Acknowledgment is made to Doctor Edwin J. Brown, director of the Graduate Division of the Kansas State Teachers College of Emporia, who suggested the problem and directed the study.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. FIRST CLASS CITY SCHOOLS	5
III. SECOND CLASS CITY HIGH SCHOOLS	20
IV. THE CONSOLIDATED HIGH SCHOOLS OF KANSAS WITH THE 8-4 PLAN OF ORGANIZATION	39
V. COMMUNITY HIGH SCHOOLS	46
VI. RURAL HIGH SCHOOLS	54
VII. CITY VILLAGE SCHOOLS	65
VIII. COMPARISONS FOR THE HIGH SCHOOLS OF KANSAS ON A PER-PUPIL EXPENSE BASIS.	75

LIST OF TABLES

TABLE	PAGE
I. First Class City Schools	8
II. A Typical First Class Kansas City.	11
III. The Four Kansas Cities Agreeing Most Exactly with the Hypothetical Typical First Class City in School Statistics	13
IV. A Comparison of the First Class Cities of Kansas on the Three Bases of Per-Pupil Valuation, Per-Teacher Valuation and Cost of Instruction Per-Pupil Per-Month.	16
V. Rankings of First Class City Schools	18
VI. Second Class City Schools 6-3-3 Organization	22
VII. The Lowest, Highest and Median Valuation, Operating Expense, Enrollment, No. of Teacher, Per-Pupil Valuation, and the Per-Pupil-Per-Month Cost of the Second Class Cities with the 6-3-3 Plan of Organization	26
VIII. A Typical Second Class City School with the 6-3-3 Organization	28
IX. Second Class City Schools 8-4 Organization	29
X. The Lowest, Median, and Highest Valuation, Operating Expense, Enrollment, No. of Teachers, Per Pupil Valuation and the Per-Pupil Per-Month Cost of the Second Class Cities with the 8-4 Plan of Organization. . .	33

TABLE	PAGE
XI. A Typical Second Class City School with the 8-4 Plan of Organization	35
XII. A Comparison of the Highest, Median, and Lowest Figures for the Items: Valuation, Operating Expense, No. of Teachers, Enrollment, Per-Pupil Valuation, and the Cost-Per-Pupil	36
XIII. Consolidated High Schools 8-4 Organization	40
XIV. The Ranges in Valuation, Operating Expenses, No. of Teachers, Enrollment, Valuation Per-Pupil and the Operating Expense Per-Pupil-Per-Month of the Consolidated High Schools with the 8-4 Plan of Organization	43
XV. A Typical Consolidated High School Based on the Median For the Valuation, Operating Expense, Enrollment, No. of Teachers, Assessed Valuation Per Pupil, and the Cost of Operation Per-Pupil-Per-Month.	44
XVI. Community High Schools	48
XVII. The Range in Valuation, Operation Expense, No. of Teachers, Enrollment, Valuation Per Pupil, and the Operating Expense Per Pupil Per Month of the Community High Schools of Kansas.	51

TABLE	PAGE
XVIII. A Typical Community High School Based on a Comparison of the Medians in Valuation, Operating Expenses, Enrollment, Number of Teachers, Valuation Per Pupil, and the Cost Per Pupil Per Month	55
XIX. Rural High Schools with 8-4 Organization	56
XX. A Comparison of the Highest, Median, and Lowest Valuation, Operating Expense, Number of Teachers, Enrollment, Per Pupil Valuation, and the Per Pupil Per Month Cost of Operation in One Hundred Rural High Schools of Kansas. . .	62
XXI. A Typical Rural High School Based on the Median Figures For Valuation, Operating Expense, Enrollment, Number of Teachers, Per Pupil Valuation, and the Per Pupil Expense of Operation of the One Hundred Rural High Schools Studied.	64
XXII. City Village High Schools with 8-4 Organization.	66
XXIII. The Highest, Median, and Lowest Valuation, Operating Expense, Number of Teachers, Enrollment, Per Pupil Valuation, and the Per Pupil Per Month Cost of Operation for One Hundred City Village Schools from the Third Class Cities of Kansas	71
XXIV. A Typical Third Class City Village School Based on the Median Figures for Valuation, Operating Expense, Enrollment, Number of Teachers, Per-Pupil Valuation, and the Per Pupil Per Month Expense for Operation of the One Hundred C.V.S. Districts Studied	73

LIST OF FIGURES

FIGURE	PAGE
1. The Median Enrollment and the Median Cost Per Pupil Per Month for the Different Types of High Schools	77
2. The Number of Teachers and the Cost Per Pupil Per Month . . .	79
3. The Teacher Pupil Ratio and the Operating Cost Per Pupil Per Month	81
4. The Median Assessed Valuation Per Pupil in the High Schools of Kansas	83
5. The Valuation Per Pupil and the Cost of Operation Per Pupil Per Month	85
6. The Average Cost Per Pupil Per Month for Operation of the Different Types of High Schools	87

CHAPTER I

INTRODUCTION

Purpose of the Study

Several surveys of the schools of Kansas have been made in the past each with some definite purpose in view. There have been studies made and ideas brought forth to evaluate our schools. Any one of several bases could be used in making an evaluation of this type. In the study which is described herein the cost-per-pupil-month has been used as a comparative factor. This factor was chosen because the pupil is the unit around which the school is built and the cost of educating this pupil should be a reliable factor to use in determining the efficiency of the school. It is therefore the purpose of this research to set forth in a comparative way some of the facts concerning the per-pupil-cost of operation in the different types of high school organizations in the State of Kansas.

Source of Material

The data for this study have been gathered largely from the Biennial Reports of the State Superintendent of Public Instruction mainly the Thirtieth Biennial Report for the years 1935-1936. All of the data used are for the year 1936. Some of the material was gathered from the Reports of the County Superintendents on file in the office of the State

Superintendent in Topeka. Books, Pamphlets, Magazines, and Newspapers have also been used.

Organization of Material

The schools of Kansas are classified according to the type of district organization employed. These different types are: 1st class city schools, 2nd class city schools, rural high schools, (R.H.S.), community high schools (C.H.S.), consolidated high schools, and the (C.V.S) city village schools. Each of the above types are included in this study. These types of schools are further classified according to the plan of organization used in the school. The principal legal types of organization in Kansas are: (8-4) the eight years of elementary instruction and four years of secondary instruction, (6-3-3) six years of elementary instruction, a three year junior high school and a three year senior high school. There are some variations of these plans used by a small number of schools. Only the schools with the 6-3-3 or the 8-4 plan of organization are used in this research.

In order to get a representative group of rural high schools every third school was chosen from an alphabetical list of these schools. The same procedure was used in the city village schools. All of the first class city schools were used. In the second class cities only those schools with the 6-3-3 or the 8-4 type of legal organization were chosen, this included sixty-nine of the seventy-seven second class city schools. All community high schools were included. Those consolidated high schools

with the 8-4 plan of organization were chosen. The following information was gathered for each school.

1. Valuation of the district.
2. Total operating expense.
3. Number of teachers.
4. Number of pupils.
5. The valuation per pupil.
6. The per-pupil-per-month cost of operation.

Some Limitations of the Study

There are some districts which maintain both elementary and secondary schools under one board of education and with one budget. This is true of the consolidated schools and the city village schools. In these same districts when the superintendent is required to report both the high school and the grade school expenses separately, quite probably an inaccurate estimate of the expense is reported. This must be remembered when comparing these schools with others where only a secondary school is maintained.

Definition of Terms

C.V.S. -- City Village School.

R.H.S. -- Rural High School.

C.H.S. -- Community High School.

- 8-4 -- Eight years of elementary instruction and four years of secondary instruction.
- 6-3-3 -- Six years of elementary instruction, three years of junior high school instruction and three years of high school instruction.

CHAPTER II

FIRST CLASS CITY SCHOOLS

In the State of Kansas there are eleven cities that because of their size and organization are classed as first class cities. It was in what is now Kansas City, Kansas, that the first public school in the state was organized.¹ This was in July 1844. Kansas City has been considered as one of the most progressive cities in the state along educational lines. This progressiveness is indicated by the superiority of the new Wyandotte High School just recently completed.

The first public high school² in the state was opened in Lawrence in 1864. The University of Kansas was organized about the same time.

In general the city schools of Kansas are considered as offering the greatest educational advantages available in the state. The greatest concentration of wealth is in the cities. This does not necessarily mean that the best schools are found where the most wealth is concentrated, but there is little doubt that a district cannot support a school without having material means.

Again, this concentration of wealth makes it possible for the district to maintain a school without the added expense of pupil transportation becoming a major factor. Along with the concentration of wealth there

¹ W. T. Markham, Thirtieth Biennial Report, (Topeka: Kansas State Printing Plant, 1936), p. 12.

² Ibid., p. 13.

tends to be a concentration of pupils.

It is known that the most elaborate program of study is offered in the large city high school. There can be no doubt that these schools are far superior to the small schools in this line.

With the concentrated wealth, the compact student body, and the large offering of the first class city schools, there are a few factors that must be considered from the educational standpoint, that are not so favorable. First, there is the wide variation in the types of homes from which the pupils come. There are the boys and girls from the working class, from the unemployed, from the business men, and from the homes of wealth all attending the same school. While this may make for a more cosmopolitan group, the wide difference of interests tends to make necessary the requirement that the school offer more subjects. For this reason the number of offerings in the school may not indicate its efficiency. In some of the rural high schools the entire student body may have identical interests and therefore a smaller curricular offering may be as complete as the demand calls for.

Again, there is no chance for the student body of the large city school to become personally acquainted with each other or with the instructors. In the smaller schools a more personal relationship is possible.

It is not the purpose of this study to point out the good and the bad points of the various types of schools, but the statements made above are brought in to show that there are factors other than per pupil cost that can be used to determine the efficiency of a school.

The statistical data were obtained from the reports of the State Superintendent³ for 1935 and 1936. The tables on the following pages were compiled from this source.

Table I is the data table that will be used in the following study of the first class city schools. The information contained in this table has been broken down into Tables II, III, IV, and V which show the relationships that exist in the first class cities.

³ Ibid., pp. 459-461.

TABLE I
FIRST CLASS CITY SCHOOLS

School	Population	Valuation in thousands	Operating expenses	Number of Teachers	Enroll- ment	Cost per pupil per month
Atchison	12,615	\$ 13,617	\$ 64,420	31	1,044	\$ 6.85
Coffeyville	18,345	14,447	55,323	27	819	7.51
Fort Scott	10,672	8,023	45,119	33	688	7.28
Hutchinson	32,790	27,720	75,893	38	1,266	6.66
Kansas City	122,565	98,276	217,938	116	4,099	5.91
Leavenworth	19,333	13,638	37,634	21	624	6.70
Parsons	14,438	12,193	36,161	16	714	5.62
Pittsburg	18,628	15,657	52,834	27	890	6.60
Salina	19,586	26,088	54,722	28	912	6.66
Topeka	68,870	82,987	214,340	69	2,281	10.44
Wichita	102,698	132,449	417,063	151	4,701	9.85

Read table thus: The population of Atchison is 12,615. The valuation of the school district was \$13,617,000. The operating expenses for the school were \$64,420. There are 31 teachers and 1,044 students in the Senior High School. The cost per pupil per month, based on enrollment was \$6.85. Read in like manner for other schools in this table.

A Typical First Class City High School

The description of a first class city high school from the statistical view point will be limited to the items studied in this chapter. There has been no attempt made to evaluate the curricular offering of the various schools in connection with this study.

The typical first class city high school would be located in a city of slightly more than 40,000 people. One of the finest public buildings in the city would be the high school. This would be one large structure, for most of the first class cities in Kansas have only one high school building.

In this building there would be some 1500 students. These students would be instructed by a staff of fifty teachers, supervisors, principals, and a superintendent. All of these teachers are well trained and teaching in the fields that they were trained to work in most efficiently.

This city district would have a valuation of \$15,600,000. It would spend for the operation of its high school a sum of \$55,300. In addition to this amount several thousand dollars would be spent for general control, capital outlay, and other non-recurring expenses.

In the school, the average class would be thirty pupils per teacher. Since each teacher has approximately five classes per day he would come in contact with one tenth of the student body each day.

The typical first class city school spends an average of \$6.70 per pupil per month for operation. This figure is the median for the

first class city high schools of Kansas. No expense other than operation was considered in the determination of cost. Capital outlay, indebtedness, etc. are outside the range of per-pupil cost. The greatest amount spent by any first class city was \$10.44. The least expenditure by any school was \$5.62.

In this typical first class Kansas city, the amount of taxable property back of each high school pupil would be \$21,530. This taxable valuation is available to the district for raising the \$6.70 per pupil per month that it spends.

The per-teacher valuation, another factor used in this study, finds the typical school with an assessed valuation of \$702,545 per teacher in the high school.

While this typical high school does not exist in the State of Kansas, of course, it is developed statistically by using the average of each item collected for the eleven first class city schools. The following table is a summary of these averages.

TABLE II
A TYPICAL FIRST CLASS KANSAS CITY

Item	Average
Population	40,048
Valuation	\$15,657,000
Operating expense	\$55,300
No. of teachers in Sr. High Sch.	50
Enrollment	1,500
Cost per pupil	\$6.70
Per pupil valuation	\$21,530
Per teacher valuation	\$702,545

Read table thus: On a basis of the items compared for the first class cities the average population is 40,048. The valuation is \$15,657,000. Read in like manner for other items in this table.

In Table III the averages of the items compared were applied to the first class cities with the idea of finding which of these cities would most nearly be a typical first class city. In the previous table (No. II) the averages were compiled. By taking these averages and applying them to the values determined for the various cities in Table I the following results were obtained.

Hutchinson was the nearest city to the average in population, number of teachers, enrollment, and per-teacher valuation. In the cost-per-pupil-per-month Hutchinson has a cost of \$6.66 and the average was \$8.70. This gives Hutchinson a first ranking in four of the eight items and a close second in another. These results would indicate that Hutchinson might be classed as an example of the typical first class city school in Kansas.

TABLE III

THE FOUR KANSAS CITIES AGREEING MOST EXACTLY WITH
THE HYPOTHETICAL TYPICAL FIRST CLASS CITY
IN SCHOOL STATISTICS

Item	Average City
Population	Hutchinson
Valuation	Pittsburg
Operating expense	Coffeyville
No. of teachers	Hutchinson
Enrollment	Hutchinson
Cost per pupil	Leavenworth
Per pupil valuation	Leavenworth
Per teacher valuation	Hutchinson

Read table thus: On a comparison of items listed the city ranking nearest the average in population was Hutchinson. In valuation Pittsburg. Read in like manner for other items.

Valuation Comparison

The valuation of a district should determine its ability to pay for its schools. This does not mean that it does determine the amount spent in every case. Total valuation alone does not give an entirely significant figure to use as a basis of comparison. In this study two different valuation ratios have been used. The per-pupil valuation and the per-teacher valuation. These should offer more equitable basis for comparison than total valuation alone.

In the per-pupil valuation there is a range from \$11,510 per-pupil in Fort Scott, to a valuation of \$36,300 per-pupil in Topeka. The cost per-pupil per-month in Fort Scott is \$7.28. In Topeka the cost is \$10.44. This shows that Topeka spends nearly 43% more per-pupil per-month than Fort Scott, but to pay for this 43% they have a valuation per-pupil that is more than 200% greater than that in Fort Scott.

Another significant fact is brought out in a study of these comparisons. The greatest per-pupil cost is found in the district where there is the highest per-pupil valuation and also the highest per-teacher valuation. There is no direct descending order from the highest to the lowest, but a study of the averages shows some important trends. There seems to be a general tendency for the school that is average in valuation per-pupil to be average in the cost-per-pupil. This is shown by Leavenworth. This city is also very close to the average in the valuation per-teacher.

In the per-teacher valuations there is to be found a much wider spread. Fort Scott is again low with \$243,000 and Topeka is high with \$1,202,000 per teacher. This is a difference of nearly a million dollars per-teacher which is a significant figure. This is an excess in favor of Topeka of nearly 500%. In this group Hutchinson ranks nearest the average. Leavenworth is very close to the mean also. This shows that there is a tendency for these schools that are near the average in these valuations to be near the average in the per-pupil cost.

All of these facts seems to point out that there is a tendency for the districts with the high valuations to spend the most money per pupil. It does not show, however, that the lowest valuation districts spend the least. This fact is due quite likely to the standards that are set up for the schools. In the poorer districts the levy would have to be higher and likewise the tax load on the individual taxpayer would be greater. In the districts where the money is more plentiful the school heads are more free to go ahead with a broader and more progressive program. This would lead to the higher per-pupil cost in these districts. There can be no doubt that Topeka has one of the finest high schools in the State of Kansas.

A complete summary of these comparisons is found in Table IV.

TABLE IV

A COMPARISON OF THE FIRST CLASS CITIES OF KANSAS ON THE THREE
BASES OF PER-PUPIL VALUATION, PER-TEACHER VALUATION
AND COST OF INSTRUCTION PER-PUPIL PER-MONTH

School	Per pupil Valuation	Per teacher Valuation	Cost per- pupil-per- month
Atchison	\$13,040	\$ 439,000	\$ 6.85
Coffeyville	17,600	532,000	7.51
Fort Scott	11,510	243,000	7.28
Hutchinson	21,890	729,000	6.66
Kansas City	23,900	845,000	5.91
Leavenworth	21,850	649,000	6.70
Parsons	17,070	762,000	5.62
Pittsburg	17,500	579,000	6.60
Salina	29,600	931,000	6.66
Topeka	36,300	1,202,000	10.44
Wichita	28,100	877,000	9.85

Read table thus: Atchison has a valuation per pupil enrolled in the high school of \$13,040. The per teacher valuation is \$439,000. The cost per pupil per month is \$6.85.

Summary of Rankings

Table V is a table of ranks of the first class city schools on the items studied. To obtain these ranks the value assigned each city was ranked in order from the greatest to the least. Thus with Atchison: This city was 10th in population; 9th in valuation, etc. The average rank is the arithmetical average of all the rankings received by the school.

TABLE V
RANKINGS OF FIRST CLASS CITY SCHOOLS

	Atchison	Coffeyville	Fort Scott	Hutchinson	Kansas City	Leavenworth	Parsons	Pittsburg	Selma	Topoka	Wichita
Population	10	8	11	4	1	6	9	7	5	3	2
Valuation	9	7	11	4	2	8	10	6	5	3	1
Operating expense	5	6	9	4	2	10	11	8	7	3	1
Number of teachers	6	9	5	4	2	10	11	8	7	3	1
Enrollment	5	8	10	4	2	11	9	7	6	3	1
Cost per pupil	5	3	4	8	10	6	11	9	7	1	2
Valuation per pupil	10	7	11	5	4	6	9	8	3	2	1
Valuation per teacher	10	9	11	6	4	7	5	8	2	1	3
Average rank	<u>7.5</u>	<u>7.1</u>	<u>9</u>	<u>7.9</u>	<u>3.3</u>	<u>8.1</u>	<u>9.3</u>	<u>7.6</u>	<u>5.4</u>	<u>2.</u>	<u>1.5</u>

Read table thus: On a basis of the items compared Atchison ranked: 10th in population; 9th in valuations; 5th in operating expense; 6th in the number of teachers, etc. The average of the rankings was 7.5. Read in like manner for other cities.

In the average rankings of the items listed Wichita was highest with an average of 1.5. The schools rated as follows:

Wichita	1.5
Topeka	2.0
Kansas City	3.3
Salina	5.4
Coffeyville	7.1
Atchison	7.5
Pittsburg	7.6
Hutchinson	7.9
Leavenworth	8.1
Fort Scott	9.0
Parsons	9.3

There are some definite trends as noted in this study thus

far:

1. There is a direct relationship between the valuation per-pupil of the district and the cost per-pupil per-month. This is especially true in the districts with the highest per-pupil valuation and those with the lowest per-pupil valuation.
2. There is no definite relationship between the number of teachers and the cost per-pupil.
3. There seems to be no definite relationship between the enrollment and the per-pupil cost.
4. There is a direct relationship between valuation of the district and the operating expense.

CHAPTER III

SECOND CLASS CITY HIGH SCHOOLS

In this chapter on the second class city schools of Kansas, the material has been divided according to the plan of organization employed by the schools. Only the schools with the 6-3-3 or those with the 8-4 plan have been included. This is sixty-nine of the seventy-seven second class city schools.

In the history of the secondary schools of Kansas there is shown a very rapid increase in the enrollment and the number of high schools in the state. The second class cities have grown very rapidly. Most of these cities were started and grew due to some new industry which opened up in that location. This rapid growth of the cities brought with it the rapid increase in school population.

There has been a tremendous increase in the secondary school enrollment¹ since 1900. At that time there were 132 high schools in the state with an enrollment of 11,508. In 1920 there were 663 high schools and an enrollment of 64,327. The secondary schools had an enrollment of 103,955 in the 690 organized high schools of the state in 1935.

This group of figures represent the increase in all of the secondary schools, it is representative of the conditions in the second class city schools also. With this increase there has been an ever increasing number

¹ W. T. Markham, Handbook on Organization and Practices, (Topeka: Kansas State Printing Plant, 1936), p. 9.

of problems that have faced the schools. Among these problems were those of buildings, new equipment, improved teacher-training and new types of organizations. Out of the administrative attempt to set up a school which would deal with this problem there grew up the 6-3-3 plan of organization in some of the school systems. This is a plan that presumes a separate housing and administrative set-up for the junior and senior high schools.

The 6-3-3 plan has found greatest favor in the larger schools. This is the prevailing type in the first-class cities and there are thirty-nine schools of this type in the cities of the second-class. Too many times the 6-3-3 plan or some other deviation of the 8-4 organization is different in name only and there is no difference in the curriculum. For the purpose of this study it will be presumed that all of these listed schools have a different administrative set up as far as the operation expenses are concerned.

In the following Table² six items are used to form a basis for comparison of the second-class city senior high schools with the 6-3-3 organization. These items are: valuation, operating expense, number of teachers, enrollment, valuation-per-pupil, and the cost-per-pupil-per-month. From the material in this table other tables of comparison have been derived.

² W. T. Markham, Thirtieth Biennial Report, (Topeka: Kansas State Printing Plant, 1936), pp. 459-481.

TABLE VI
SECOND CLASS CITY SCHOOLS
6-3-3 ORGANIZATION

School	Valuation in thousands	Operating expenses	Number of teachers	Enroll- ment	Valuation per pupil	Cost per pupil per month
Anthony	\$ 3,941	\$22,719	13	310	12,710	\$ 8.14
Arkansas City	16,277	61,023	28	749	21,730	7.56
Baxter Springs	2,206	14,517	10	260	7,870	5.76
Belleville	2,511	18,693	11	292	3,560	7.11
Bonner Springs	2,832	21,255	11	206	12,800	11.46
Chanute	8,322	50,092	19	557	14,940	9.99
Cherryvale	2,908	13,731	7	226	12,870	6.75
Concordia	5,626	16,379	14	335	16,790	6.43
Dodge City	10,075	29,618	17	468	21,520	6.89
Eldorado	9,288	44,476	22	701	13,240	7.00
Emporia	17,301	56,081	27	804	21,510	7.75
Eureka	3,052	20,577	11	363	8,400	6.28
Florence	2,514	13,037	7	199	12,630	7.27
Fredonia	2,925	23,750	11	268	10,910	9.84
Frontenac	767	4,242	5	144	5,250	3.27
Garden City	5,444	20,342	11	317	17,170	7.13
Girard	1,937	20,893	10	359	5,390	6.46
Great Bend	6,278	19,919	15	479	13,100	6.71
Hawatha	3,612	14,811	9	211	18,060	7.80
Horton	2,892	9,632	6	163	17,740	6.57
Humboldt	4,175	25,279	10	257	16,240	10.93
Independence	11,996	98,177	22	565	21,230	8.43
Iola	5,184	29,052	12	384	13,500	8.41
Kingman	2,706	26,364	13	349	7,750	8.39
Kinsley	2,266	12,118	7	143	15,920	9.41
Larned	3,595	27,891	14	387	9,280	8.01
Lawrence	18,614	80,037	30	815	22,830	10.91
Liberal	4,912	16,242	12	263	18,670	6.87
Manhattan	11,592	43,108	19	581	19,950	8.22
McPherson	7,359	31,554	14	427	17,290	8.21
Minneapolis	2,245	17,415	8	210	10,690	9.21
Newton	10,997	66,501	32	961	11,440	7.69

TABLE VI (continued)

School	Valuation in thousands	Operating expenses	Number of teachers	Enroll- ment	Valuation per pupil	Cost per pupil per month
Olathe	\$ 2,894	\$22,207	10	252	11,480	\$ 9.79
Osawatomie	2,908	15,608	10	393	7,390	4.41
Osborne	1,868	21,612	13	261	7,160	9.20
Ottawa	8,671	40,152	22	514	16,860	8.68
Sabetha	2,017	16,816	10	226	8,920	8.25
Sterling	2,163	12,887	8	142	15,230	10.08
Wellington	6,881	54,376	15	538	12,780	5.65

Read table thus: Anthony had a valuation of \$3,941.00. The operating expenses were \$22,719. There were 13 teachers and an enrollment of 310 pupils. The cost-per-pupil-per-month based on enrollment was \$8.14.

The Ranges In The Items Compared For Second Class City Schools With The 6-3-3 Type of Organization

In the 39 second class city schools with the 6-3-3 plan of organization, there is a range in valuation of the district from \$757,000 in Frontenac to \$18,614,000 in the city of Lawrence. This is a difference of \$17,957,000. This wide range in valuation might lead to the assumption that there would be a greater per-pupil per-month expenditure in Lawrence than in Frontenac. This is true. Frontenac has the lowest per-pupil cost of the schools in this classification. Lawrence is third from the highest

in per-pupil cost in this group of second-class cities. Humboldt and Bonner Springs both have higher per-pupil per-month expenses than Lawrence. Both Humboldt and Bonner Springs rank below the median of the group in valuation. Evidently, there is no direct relationship between valuation and per-pupil per-month expense of this group of schools. While correlations were not determined there is reason to believe that such, if found, would be insignificant.

The operating expenses vary from \$98,177 in Independence to \$4,242 in Frontenac. This is a variation of \$93,935. Independence with a per-pupil cost of \$8.43 is well above the median of \$7.94 per-pupil per-month, for schools in this classification.

Newton has the greatest number of teachers to be found in these schools. Frontenac has five teachers, this is the least number to be found in any of these schools. The teacher-pupil ratio in Frontenac is 28.8 to 1. In Newton the ratio is thirty to one. Newton has a per-pupil cost of \$7.69 this is near the median of \$7.94.

The pupil enrollments of these schools range from a low of 142 in Sterling to the high of 961 in Newton. This is a difference of 819. The teacher-pupil ratio in Sterling is 17.8 to 1. The per-pupil cost of Sterling is \$10.08 which is fourth from the highest. Frontenac, lowest in per-pupil cost, is next to the lowest in enrollment with 143. This indicates that there is, in this class of school, no direct relation between the enrollment and the cost per-pupil.

The per-pupil valuation is used as a measure in this study. Frontenac has the lowest per-pupil valuation of the group, \$5,250. Lawrence has the highest ranking in this item, \$22,830. This is a spread of \$17,580. This taxable valuation is available to the district for the support of the school. Lawrence with a per-pupil valuation of 300% greater than Frontenac, spends 200% per-pupil per-month more in its school than does Frontenac.

The measure, cost per-pupil per-month based on enrollment, which is the factor used in this research as a "control" for these schools shows a very broad range. The low of \$3.27 in Frontenac is \$1.14 per month lower than the next higher, Ossawatimie. The highest, \$11.46 in Bonner Springs, is fifty-three cents per-month more than the next lower, Humboldt. There is a spread in this measure of \$8.19 per-pupil per-month. The median in this measure is \$7.94.

These ranges have been taken from the table of data for second class city schools with 6-3-3 organizations. To put these data in a table that will show the high, median, and low for each of the measures Table VII has been compiled.

TABLE VII

THE LOWEST, HIGHEST AND MEDIAN VALUATION, OPERATING EXPENSE,
ENROLLMENT, NO. OF TEACHERS, PER-PUPIL VALUATION, AND
THE PER-PUPIL-PER-MONTH COST OF THE SECOND CLASS
CITIES WITH THE 6-3-3 PLAN OF ORGANIZATION

Item	Lowest	Median	Highest
Valuation	\$757,000	\$3,833,000	\$18,614,000
Operating expense	4,242	21,800	98,177
No. of teachers	5	12.2	32
Enrollment	142	315	961
Per-pupil valuation	5,250	13,780	22,830
Cost per-pupil	3.27	7.94	11.46

Read table thus: In cities of the second class with a 6-3-3 organization the lowest valuation was \$757,000. The median valuation was \$3,833,000 and the highest valuation was \$18,614,000. Read in like manner for other items in this table.

A Typical Second Class City School
With the 6-3-3 Organization

The following is a description of the typical second class city school with the 6-3-3 organization. The factors are the averages for the items used in this study.

The typical second class city school district has a valuation of \$3,833,000. This assessed valuation is used to raise the \$21,000 that is used for the operating expense of the school.

In this school there are 315 pupils enrolled. They are directed by a staff of twelve teachers. These teachers are all trained for their positions and are directed by principals and a superintendent. The average class has twenty-six.

Back of each pupil in this district there is a taxable valuation of \$13,780. This valuation is available to raise the \$7.94 per-pupil-per-month that this district spends in maintaining the high school.

A summary of these averages will be found in Table VIII. A comparison of the 6-3-3 schools in cities of the second class, and the schools with the 8-4 organization is shown in Table XII.

TABLE VIII
 A TYPICAL SECOND CLASS CITY SCHOOL
 WITH THE 6-3-3 ORGANIZATION

Item	Median
Valuation	\$3,833,000
Operating expense	\$21,800
No. of teachers	12.2
Enrollment	315
Teacher pupil ratio	25.8
Per pupil valuation	\$13,780
Cost per pupil per month	\$7.94

Read table thus: In schools with the 6-3-3 plan of organization of the second class cities the average valuation was \$3,833,000. The operating expense was \$21,800. Read in like manner for other items in this table.

TABLE IX
SECOND CLASS CITY SCHOOLS
8-4 ORGANIZATION

School	Valuation in thousands	Operating expenses	Number of teachers	Enroll- ment	Valuation per pupil	Cost per pupil per month
Abilene	\$ 9,258	\$42,551	19	556	\$16,680	\$ 8.50
Augusta	3,244	28,187	14	243	7,320	7.07
Beloit	3,634	27,010	13	284	12,790	10.56
Burlington	1,677	19,202	12	313	5,350	6.82
Caldwell	2,236	9,994		211	10,590	5.26
Caney	2,562	20,830	13	344	7,440	6.73
Chetopa	727	6,456	6	141	5,150	5.08
Council Grove	2,483	19,546	10	269	9,230	8.07
Galena	1,327	9,518	9	285	4,650	3.71
Garnett	2,296	20,033	9	281	8,170	7.89
Harper	1,848	19,919	10	261	7,080	8.87
Hays	3,033	17,464	11	219	13,840	8.86
Herrington	2,994	19,931	10	365	8,200	6.06
Holsington	2,861	20,703	11	291	9,830	7.90
Holton	2,770	24,616	14	402	6,850	6.81
Junction City	7,340	59,642	31	962	7,620	6.89
LaHarpe	607	7,331	7	112	5,410	7.27
Lindsborg	2,249	20,260	9	199	11,300	11.56
Lyons	3,535	19,327	11	318	11,110	6.75
Marion	1,928	53,142	9	225	8,560	6.48
Marysville	4,041	26,271	15	440	9,180	6.63
Mulberry	597	3,717	4	135	2,940	3.06
Neodesha	4,345	47,859	23	627	6,930	8.48
Osage City	1,848	17,617	9	214	8,630	9.14
Oswego	1,630	11,639	6	159	10,250	8.13
Pratt	5,580	26,054	28	357	16,630	8.10
Seneca	1,772	11,661	7	121	14,640	10.71
Weir	319	4,563	3	113	2,820	4.49
Winfield	10,770	52,732	21	604	17,830	9.70
Yates Center	1,491	17,789	12	266	5,600	7.45

Read table thus: Abilene had a valuation of \$9,258,000. The operating expenses for the year were \$42,551. There were 19 teachers and 556 pupils. The cost per-pupil-per-month on a basis of the enrollment was \$8.50. Read in like manner for other cities in this classification.

Ranges Found In The Second Class City Schools
With The 8-4 Type of Organization

There are seventy-seven cities of the second-class in the State of Kansas. In these cities there are thirty that have schools with the eight-year elementary school and the four-year high school. These are known as the schools with the 8-4 legal organization. The schools of this class are listed in Table IX. In this Table the schools have been studied for each of the following items: Valuation of the district, operating expense, number of teachers in the senior high school, high school enrollment, valuation-per-pupil, and the cost-per-pupil-per-month.

The lowest valuation found in these schools was \$319,000 which was the taxable valuation of Weir. The highest valuation was in the city of Winfield. In this city the valuation was \$10,770,000. There is a difference in range from the lowest to the highest of \$10,451,000. In percent this is an excess of approximately 3,200% in favor of Winfield. Weir spends \$4.49 per-pupil-per-month. Winfield spends \$9.70 per-pupil-per-month. Between these two schools there is a spread of \$5.21 in this item. This shows that Winfield with its larger valuation spends 120% more than Weir per-pupil-per-month, this is as it should be in these schools.

The operating expenses of these schools range from \$3,717 in Mulberry to \$54,642 in Junction City. This is a difference in this item of \$55,925 or an excess of 1,500% in favor of Junction City. Mulberry

spends \$3.06 per-pupil-per-month. Junction City has an expense of \$6.89 for this item. A difference between these two schools of \$3.83 is shown in the cost per-pupil-per-month.

A very wide spread is found in the number of teachers in these schools. Weir is lowest with three and Junction City is highest with 31. The teacher-pupil ratio in Weir is 37.8 to 1. In Junction City the ratio is thirty-two to one. The cost-per-pupil-per-month is \$4.49 in Weir and \$6.89 in Junction City.

LaHarpe has 112 pupils enrolled which is the least number found in any of these schools. Junction City is highest in this item with 962. The teacher-pupil ratio in LaHarpe is sixteen to one and the per-pupil cost is \$7.27. This is a difference of only thirty-eight cents per-pupil-per-month from the cost shown for Junction City in the previous paragraph. These figures would indicate that neither the teacher-pupil ratio nor the number of teachers in the system determines the cost-per-pupil-per-month.

The valuation per-pupil of the district is used as a factor in this study. In this item Weir is lowest with an assessed valuation of \$2,820 back of each pupil in the senior high school. Winfield has the highest valuation per-pupil enrolled, \$17,830. This means that each pupil in Winfield has 500% more property valuation back of him than has each pupil in the Weir school. Winfield spends 120% more than Weir per-pupil-per-month.

The cost-per-pupil-per-month, which is the major factor used as a basis of comparison in this research, also shows a wide variation.

Mulberry is lowest in this item with an expense of \$3.06 per-pupil-per-month enrolled in the high school. Lindsborg spends \$11.56 which is the highest for cities of this group. There is a difference of \$8.50 between these two cities for this item. The \$3.06 for Mulberry is only sixty-five cents per-pupil lower than the next higher school, Galena, which has a per-pupil expense of \$3.71. There is a difference of eighty-five cents per-pupil between Lindsborg, which is highest, and Seneca which is the next lower in rank in this item.

In order that these items might be seen more clearly Table X has been compiled. This table shows the lowest, median and the highest ranking value in each item.

TABLE X

THE LOWEST, MEDIAN, AND HIGHEST VALUATION, OPERATING EXPENSE,
ENROLLMENT, NO. OF TEACHERS, PER PUPIL VALUATION
AND THE PER-PUPIL PER-MONTH COST OF THE SECOND
CLASS CITIES WITH THE 8-4 PLAN OF ORGANIZATION

Item	Lowest	Median	Highest
Valuation	\$319,000	\$2,300,000	\$10,770,000
Operating expense	3,717	19,925	59,642
No. of teachers	3	11	31
Enrollment	112	283	962
Per pupil valuation	2,820	9,020	17,830
Cost per pupil	3.06	7.33	11.56

Read table thus: In cities of the second class with an 8-4 plan of organization the lowest valuation was \$319,000. The median for the group was \$2,300,000. The highest valuation was \$10,770,000. Read in like manner for other items in this table.

A Statistically Compiled Typical Second Class City School
with the 8-4 Plan of Organization

In order to get a more vivid picture of the situation in the second class city schools, a statistically typical school has been compiled from the items used in this research.

This typical city school has a taxable valuation of \$2,300,000 back of its school. This valuation is available to the school to use in raising the \$19,925 for operating expenses. Other expenses are paid for from the same taxable source.

There are eleven teachers and 283 pupils in this school. This would make teacher-pupil ratio of 25.7 to 1. The school would be directed by a superintendent and assisting principals.

Back of each pupil in the school would be \$9,020 assessed valuation. The cost of operation based on enrollment is \$7.33 per-pupil-per-month.

A summary of these items is found in Table XI. A comparison of the schools in the second class cities, both 6-3-3 and 8-4 plans of organization, will be found in Table XII. In this table the lowest, median and highest values for each item studied are listed.

TABLE XI
 A TYPICAL SECOND CLASS CITY SCHOOL
 WITH THE 8-4 PLAN OF ORGANIZATION

Item	Median
Valuation	\$2,300,000
Operating expense	\$19,925
No. of teachers	11
Enrollment	285
Per-pupil valuation	9,020
Cost-per-pupil-per-month	7.33

Read table thus: The typical second class city school with the 8-4 plan of organization has a valuation of \$2,300,000. The operating expense was \$19,925. Read in like manner for other items in this table.

TABLE XII

A COMPARISON OF THE HIGHEST, MEDIAN, AND LOWEST FIGURES FOR THE ITEMS: VALUATION, OPERATING EXPENSE, NO. OF TEACHERS, ENROLLMENT, PER-PUPIL VALUATION, AND THE COST-PER-PUPIL.

Item		Lowest	Median	Highest
Valuation	(6-3-3)	\$757,000	\$3,833,000	\$18,614,000
Valuation	(8-4)	\$319,000	\$2,300,000	\$10,770,000
Operating expense	(6-3-3)	\$4,242	\$21,800	\$98,177
	(8-4)	\$3,717	\$19,925	\$59,642
No. of teachers	(6-3-3)	5	12.2	32
	(8-4)	3	11	31
Enrollment	(6-3-3)	142	315	961
	(8-4)	112	283	962
Per-Pupil valuation	(6-3-3)	\$5,250	\$13,780	\$22,830
	(8-4)	\$2,820	\$9,020	\$17,830
Per-Pupil Cost	(6-3-3)	\$3.27	\$7.94	\$11.46
	(8-4)	\$3.06	\$7.33	\$11.56

Read table thus: The lowest valuation in cities of the second class with the 6-3-3 plan of organization was \$757,000. In cities with the 8-4 plan of organization the lowest valuation was \$319,000. Read in like manner for the median and the highest of each item listed.

There are some interesting facts shown in a comparison of the schools employing the 6-3-3 organization with those organized on the 8-4 basis. These are shown in Table XII.

The valuations of the cities using the 6-3-3 plan are higher in each of the three measures listed. There is a difference of \$1,533,000 in the median value for this item. This might indicate that the cities with a higher valuation have taken a more progressive step in organization. It is usually considered a sounder plan to have a separate organization for the junior and senior high schools.

These figures indicate that the operation expense is lower in the 8-4 plan of organization. There is a difference of \$1,750 in the median values for this item. This is to be expected because the median enrollment for 8-4 schools is lower. There are fewer teachers in the median 8-4 school. Both of these factors might help to account for the difference in operating expense.

The median enrollment of the 8-4 schools is 283 while the 6-3-3 schools have a median enrollment of 315. This would indicate that the 6-3-3 schools are located in the larger second class cities. The teacher-pupil ratio for the median of the 6-3-3 schools is 25.6 to 1 while in the 8-4 schools the median ratio is 25.7 to 1.

The per-pupil valuation is higher in the 6-3-3 schools. The median per-pupil valuation in the 6-3-3 schools is \$13,780. In the 8-4 schools the median per-pupil valuation is \$9,020. There is a difference here of \$4,760 in favor of the 6-3-3 schools.

In a comparison of the per-pupil per-month costs of the two systems there are some interesting facts revealed. The lowest and the highest costs are found in the 8-4 schools. There is however no significant difference in either of these measures when they are compared with the corresponding measure for the 6-3-3 schools. In a comparison of the median per-pupil-cost for the two types of schools it is shown that the 6-3-3 schools have the higher per-pupil-per-month cost. The cost per-pupil for the 6-3-3 schools is \$7.94. The cost per-pupil for the 8-4 schools is \$7.33. There is a difference of only sixty-one cents per-pupil-month in the medians of these schools. This difference is not great enough to warrant any generalizations concerning which is the more efficient type of school organization.

Summary of Chapter III

1. There is a general tendency for the schools with the greater per-pupil valuations to have the higher per-pupil-per-month cost.
2. The enrollment of the school does not give an index to the per-pupil-per-month cost.
3. The number of teachers does not produce a reliable index of the per-pupil per-month cost.
4. There is no fundamental difference in the cost per-pupil-per-month in schools organized on a 6-3-3 basis when compared with schools organized on an 8-4 basis.
5. The size of the school, the number of teachers, the total enrollment, or the type of legal organization apparently has little to do with the per-pupil operating cost.

CHAPTER IV

THE CONSOLIDATED HIGH SCHOOLS OF KANSAS WITH THE 8-4 PLAN OF ORGANIZATION

The first consolidated school in the State of Kansas was formed in Ellsworth County in 1889. There were four districts united to form this school.¹ Since this time there have been a great number of districts united to form larger school units. This method of enlarging the high school district has been employed by twenty-five of the smaller Kansas cities. Twenty three of these districts have the 8-4 plan of organization. This is the group used in this study.

The districts that are consolidated must either furnish transportation or pay the individual families for transporting their own children.² In these consolidated districts the cost of pupil transportation is a major factor in the expenses of the school. This factor must be considered when a comparison of the cost of operation in consolidated school districts is made with that cost in other districts.

The consolidated schools are located in the small towns mainly in the central and western part of the State. These districts cover a large area of sparsely settled territory. There are, generally, close mutual interests among the students.

These schools have been studied on the basis of valuation, operating

¹ W. T. Markham, Thirtieth Biennial Report, (Topeka: Kansas State Printing Plant, 1936), p. 12.

² Session Laws, 1937, Sections 832-835, Chapter 38.

expenses, number of teachers, enrollment, valuation per-pupil and the cost of operation on a per-pupil per-month basis.

TABLE XIII
CONSOLIDATED HIGH SCHOOLS
8-4 ORGANIZATION

School	Valuation in thousands	Operating Expenses	Number of teachers	Enroll- ment	Valuation per pupil	Cost per pupil per month
Arnold	\$ 724	\$ 5,400	4	31	\$ 23,250	\$ 14.35
Benedict	592	9,348	6	80	7,400	12.98
Burns	1,569	8,506	6	106	14,800	8.91
Coolidge	700	5,761	4	52	13,450	12.31
Courtland	713	6,493	5	91	7,830	7.92
Coyville	419	5,651	4	50	8,380	12.55
Edson	1,156	2,702	3	38	30,420	7.91
Elgin	322	4,004	3	56	5,750	7.95
Englewood	986	7,614	6	66	14,930	12.81
Flush	456	1,288	3	41	11,120	3.49
Hartford	700	6,111	5	110	6,360	6.17
Holcomb	1,946	9,915	7	79	24,630	13.94
Kingsdown	1,038	10,422	7	59	17,590	19.62
Morehead	577	3,672	3	35	16,460	11.65
Mulvane	1,427	11,701	8	146	9,770	8.90
Neal	702	2,844	2	20	35,100	15.80
Norway	478	3,700	3	34	14,050	12.09
Protection	1,175	12,587	10	145	8,100	9.64
Quincy	1,013	3,840	4	43	23,550	9.92
Rozel	1,102	6,346	4	60	18,530	11.75
Ruleton	332	1,627	2	25	13,290	7.24
Talmage	523	4,305	4	40	13,070	11.96
Vesper	789	3,850	3	27	29,220	15.84

Read table thus: Arnold had a valuation of \$724,000. The operating expense was \$5,400. There were 4 teachers in the high school, and 31 pupils enrolled. The cost per pupil per month was \$14.35. Read in a like manner for other schools in this classification.

The Ranges Found in Consolidated High Schools

The consolidated high schools of Kansas have a very wide range in valuation. The lowest valuation is \$322,000 in the Elgin school district. In 1936 Holcomb had a valuation of \$1,946,000 this was the highest valuation for this group of schools. There is a difference of \$1,624,000 between these two valuations. The cost per-pupil per-month in Elgin was \$7.95. Holcomb had a per-pupil cost of \$13.94.

Again in the operating expenses there is a wide range. Protection with \$12,587 was the highest in the group in operating expense. Ruleton had an operating expense of only \$1,627. The per-pupil per-month costs of these two schools are interesting to compare. Protection had a per-pupil cost of \$9.64 per-month. Ruleton had a per-pupil cost of \$7.24 per-month. There was a great difference in the operating expenses of these two schools but the per-pupil costs were more nearly the same. This would indicate that the measure, operating expenses alone, should not be used as a basis for comparison of efficiency.

All of these schools were small and had a limited number of teachers. Protection had ten teachers, the greatest number found in schools of this classification. Neal and Ruleton each had only two teachers. The per-pupil expense of Protection was \$9.64 per-month. In Neal this expense was \$15.80. The per-pupil per-month cost of operation in Ruleton was \$7.24. A comparison of these three schools on this basis fails to show

that the number of teachers is a significant factor in determining the per-pupil per-month expense of the school.

There were 146 pupils in Mulvane. This was the largest enrollment of any of the consolidated schools. Neal was lowest with an enrollment of twenty. The teacher-pupil ratio in Mulvane was 18.2 to 1. In Neal the teacher pupil ratio was 10 to 1. The per-pupil expense of Mulvane was \$8.90 per-month. The per-pupil expense of Neal was \$15.80. This may indicate that for efficiency of operation a two-teacher school with 20 pupils is not practical.

There was a range in the assessed valuation per-pupil from \$5,750 in the Elgin district to \$35,100 per-pupil in the Neal district. Elgin spent \$7.95 per-pupil per-month. Neal spent \$15.80 per-pupil per-month for operating expenses.

The lowest per-pupil-per-month expense was \$3.49 in the city of Flush. This is \$2.68 per-pupil-per-month lower than the expense for Hartford which was the next higher district in this item. The highest per-pupil expense was \$19.62 per-month for the Kingsdown district. The median for the per-pupil per-month expense of the consolidated schools was \$11.50.

The range from the lowest to the highest including the median for each measure is shown in Table XIV.

TABLE XIV

THE RANGES IN VALUATION, OPERATING EXPENSES, NO. OF TEACHERS,
ENROLLMENT, VALUATION PER-PUPIL AND THE OPERATING EXPENSE
PER-PUPIL-PER-MONTH OF THE CONSOLIDATED HIGH SCHOOLS
WITH THE 8-4 PLAN OF ORGANIZATION

Item	Lowest	Median	Highest
Valuation	\$322,000	\$716,000	\$1,946,000
Operating expenses	\$1,288	\$5,761	\$12,587
Number of teachers	2	4.7(Av.)	10
Enrollment	20	62.3(Av.)	146
Valuation per-pupil	\$5,750	\$15,950	\$35,100
Cost per-pupil per-month	\$3.49	\$11.50	\$19.62

Read table thus: In the consolidated high schools the lowest valuation was \$322,000. The median valuation was \$716,000. The highest valuation was \$1,946,000. Read in like manner for other items in this table.

TABLE XV

A TYPICAL CONSOLIDATED HIGH SCHOOL BASED ON THE MEDIAN FOR THE VALUATION, OPERATING EXPENSE, ENROLLMENT, NO. OF TEACHERS, ASSESSED VALUATION PER PUPIL, AND THE COST OF OPERATION PER-PUPIL-PER-MONTH

Item	Median
Valuation	\$716,000
Operating expenses	\$5,761
No. of teachers	4.7(Av.)
Enrollment	62.3(Av.)
Valuation per pupil	\$15,950
Cost per-pupil-per-month	\$11.50

Read table thus: In the consolidated high schools of Kansas with the 3-4 plan of organization the median valuation was \$716,000. Read in like manner for other items in this table.

A Typical Consolidated High School

A study of the above table would show that the typical consolidated high school district had a valuation of \$716,000 in 1936. This valuation would be used to raise \$5,761 per-year for the operating expense of the high school.

The typical consolidated high school would be located in one of the small third class cities of Kansas. This high school would have an

enrollment of 62 pupils. These pupils would be directed in their work by five teachers. The average teacher pupil ratio in the consolidated high schools would be 13.5 to 1.

This typical consolidated high school had an assessed valuation of \$16,950 back of each pupil enrolled. From this assessed valuation there was raised \$11.50 per-pupil per-month for operating expenses.

The measure used in this research to determine the efficiency of the high school is the per-pupil per-month operating expense. In the consolidated high schools of Kansas, using the 8-4 plan of organization, this expense is \$11.50 for the typical school. This indicates that it costs more per-pupil to operate this type of school than it does to operate either the first or second class city schools previously studied.

Summary of Findings for Chapter IV

1. This group is small and there is such a wide range in the items studied that few typical trends are evident.
2. The per-pupil per-month costs are higher in this type of school than those of the larger cities previously studied.
3. The per-pupil expenditure and the valuation per-pupil show a tendency to vary in direct relationship around the median and for the highest ranking schools in these measures. There is no true relationship shown for the schools ranking low in the per-pupil cost.

CHAPTER V

COMMUNITY HIGH SCHOOLS

There are twenty-three high schools in Kansas that are organized as community high schools. An act of the state legislature¹ passed in 1923 changed the organization of the old county high schools into community high schools. The new community high schools were to include all of the territory in the county outside of the boundaries of recognized high schools. This gave these districts a very large valuation.

The Dickinson county high school at Chapman was the first county high school in the state.² This district was organized in 1889 with a valuation of \$33,000. In 1936 the valuation of this district was \$19,845,456.

The community high school district gives the school a large taxable valuation to draw from for the support of the school. Provision is also made whereby all students in the county may attend high school without having to pay tuition. These advantages should make this a popular type of organization, but they have proved not to be so popular. In most of the counties the taxpayers in the outlying parts of the district have not wanted to establish and pay for a large high school which would not be available to them.

¹ Session Laws, 1927, Section 452, Chapter 19.

² W. T. Markham, Thirtieth Biennial Report, (Topeka: Kansas State Printing Plant, 1936), p. 16.

The community high schools have been studied and the data collected for the following items: Valuation of the district, cost of operating the school exclusive of capital outlay and other nonrecurring expenses, number of teachers, enrollment, the taxable valuation per pupil, and the cost per-pupil per-month for operation. These data are found in Table XVI.

TABLE XVI
COMMUNITY HIGH SCHOOLS

School	Valuation in thousands	Operating expenses	Number of teachers	Enroll- ment	Valuation per pupil	Cost per pupil per month
Altamont	\$19,179	\$44,302	15	414	\$ 46,320	\$11.89
Atwood	4,511	17,886	10	207	21,790	9.60
Chapman	19,845	45,822	15	375	52,920	13.58
Cherokee	14,428	38,491	19	500	28,850	8.55
Clay Center	15,208	39,549	18	586	25,950	7.49
Colby	5,550	24,979	13	304	18,250	9.12
Columbus	16,336	53,753	23	623	26,210	9.58
Cottonwood Falls	4,389	19,329	8	150	29,260	14.32
Dighton	5,873	12,400	8	172	34,140	8.01
Effingham	15,001	22,684	10	203	73,890	12.41
Goodland	6,324	26,149	13	271	23,330	10.72
Hoxie	5,892	20,672	8	173	34,050	13.28
Jetmore	4,468	9,332	6	131	32,850	8.28
Johnson	3,211	7,059	4	93	34,520	8.34
Leoti	5,100	9,593	6	114	44,730	15.19
Nickerson	8,722	18,014	9	163	53,500	12.28
Norton	6,729	26,350	13	369	18,230	9.31
Oberlin	7,027	28,862	14	370	18,990	8.67
Scott City	5,473	19,150	11	217	25,220	9.80
Sharon Springs	2,719	8,683	5	102	26,650	9.45
St. Francis	4,237	16,523	9	215	19,700	8.54
Tribune	4,572	11,300	8	103	44,380	12.19
Wakeeney	8,617	27,563	11	279	30,880	10.93

Read table thus: Altamont had a valuation of \$19,179,000. The operating expenses were \$44,302. There were 15 teachers and 414 pupils in the high school. The cost per pupil per month on a basis of enrollment was \$11.89.

The Ranges for Community High Schools

There is a high valuation in all of the community high school districts. The lowest valuation was in Sharon Springs. The valuation of this district was \$2,719,000. Chapman with a valuation of \$19,845,000 was the richest district. This is a spread in valuation of \$17,126,000 or expressed in percentage and excess of nearly 800% in favor of the Chapman district. The cost per-pupil in Sharon Springs was \$9.45 per-month. This was slightly below the median for this item. Chapman spent \$13.58 per-month for each pupil enrolled. This was third from the highest for these schools.

The operating expenses of the schools ranged from a low of \$7,059 in Johnson to a high of \$53,753 in Columbus. The per pupil expense in Johnson was \$8.34 which was fourth from the lowest for these schools. The per-pupil cost in Columbus was \$9.58 per-month. This is a difference of \$1.24 between these schools. This would indicate that the operating expense of these schools does not serve as an index to the per-pupil expenditure.

In Johnson there were four teachers in the high school, the least number in any of these schools. There were twenty-three teachers in Columbus. The teacher-pupil ratio in Johnson was twenty-three to one and in Columbus twenty-seven to one. The per-pupil expenses for the two schools were compared in the above paragraph.

Again in a comparison of the enrollments of these community high schools Columbus ranked highest with an enrollment of 623. Johnson was lowest with ninety-three pupils in the senior high school. These schools have been compared in a previous paragraph on the basis of per-pupil expense.

Norton had a valuation of \$18,230 per-pupil which was the lowest in this measure for these schools. The highest valuation per-pupil was \$52,920 in the Chapman district. There is a spread in this factor of \$34,690 between the highest and the lowest. Chapman had a per-pupil cost of \$13.58 per-month. Norton has a per-pupil cost of \$9.31 per-month. These figures continue to point out the fact that the valuation per-pupil and the cost per-pupil show a direct relationship to each other.

Clay Center had the lowest per-pupil per-month expense of the community high schools. The cost per-pupil of \$7.49 in Clay Center is fifty-two cents per month less than the next higher ranking school. Clay Center had the second highest enrollment and the third highest number of teachers. The highest per-pupil expense was in Leoti. The per-pupil cost of Leoti was \$15.19 per-month. This is ninety-seven cents per-month higher than the next lower ranking school. Leoti ranked fourth from the lowest in enrollment and third from lowest in the number of teachers.

A complete summary of the ranges for community high schools is shown in Table XVII. This table includes the lowest, highest, and the median for each item used in this study of community high schools.

TABLE XVII

THE RANGE IN VALUATION, OPERATION EXPENSE, NO. OF TEACHERS,
ENROLLMENT, VALUATION PER-PUPIL, AND THE OPERATING
EXPENSE PER-PUPIL PER-MONTH OF THE COMMUNITY
HIGH SCHOOLS OF KANSAS

Item	Lowest	Median	Highest
Valuation	\$2,719,000	\$5,900,000	\$19,845,000
Operating expenses	\$7,059	\$20,672	\$53,753
No. of teachers	4	10.75	23
Enrollment	93	217	623
Valuation per-pupil	\$18,230	\$33,240	\$73,890
Cost per-pupil-per-month	\$7.49	\$9.76	\$15.19

Read table thus: The lowest valuation in the community high school districts was \$2,719,000. The median valuation was \$5,900,000. The highest assessed valuation was \$19,845,000. Read in like manner for other items in this table.

A Typical Community High School

In order to show statistically the existing conditions in a typical community high school the median figure was taken for each of the following items: valuation, operating expense, number of teachers, enrollment, valuation per-pupil, and the operating expense per-pupil per-month.

The typical community high school district had an assessed valuation of \$5,900,000 to be used to raise the \$20,672 for the operating expense of the school. All of the other revenue for the school would have to be raised from this same source.

The typical community high school in Kansas would have 217 pupils under the supervision of eleven teachers. The teacher pupil ratio in this school would be twenty to one. This is a lower ratio than exists in either the typical first class city high school or the typical second class city high school.

Back of each pupil enrolled would be an assessed valuation of \$33,240. From this valuation there would be raised by taxation \$9.76 per-pupil per-month for operating expenses of the school.

A statistical tabulation of these items is found in Table XVIII.

TABLE XVIII

A TYPICAL COMMUNITY HIGH SCHOOL BASED ON A COMPARISON OF THE
 MEDIANS IN VALUATION, OPERATING EXPENSES, ENROLLMENT,
 NUMBER OF TEACHERS, VALUATION PER-PUPIL,
 AND THE COST PER-PUPIL PER-MONTH

Item	Median
Valuation	\$5,900,000
Operating expenses	\$20,672
Number of teachers	10.75
Enrollment	217
Valuation per pupil	\$33,240
Cost per-pupil-per-month	\$9.76

Read table thus: The median valuation of the community high schools of Kansas was \$5,900,000. The median operating expense was \$20,672. Read in like manner for other items in this table.

Summary of Chapter V

In this study of the community high schools there have been some trends noted.

1. The number of teachers does not furnish an index to the per-pupil per-month cost.
2. There is a tendency for the schools that are near the median in per-pupil cost to also be close to the median in the other items listed.
3. The valuation per-pupil and the cost per-pupil per-month tend to vary directly in these schools.

CHAPTER VI

RURAL HIGH SCHOOLS

Rural high school organizations were authorized by the state legislature in 1911. Parkerville was the first district in the state to organize under this plan.¹ There was a great rush to organize these high schools in the third class cities. In 1917 a restriction was placed on the organization of districts with a valuation of less than \$2,000,000. This was planned in order that any district organizing would be able to support properly a high school. In 1936 there were 310 rural high school districts operating in the State of Kansas. This type of organization has proven to be very popular in the third class cities.

The rural high schools provide for a district with a large taxable valuation to be used for the support of the high school. The enrollment of these schools is comparatively small thus providing an opportunity for the teachers and the pupils to become thoroughly acquainted with each other.

In this research one hundred rural high schools were selected from an alphabetical list of these schools. The selection was made by selecting every third school with the 8-4 plan of organization. These schools were studied and information for the following items was collected:

¹ W. T. Markham, Thirtieth Biennial Report, (Topeka: Kansas State Printing Plant, 1936), p. 17.

valuation, operating expense, number of teachers, enrollment, per-pupil assessed valuation, and the cost per-pupil per-month.

In this study when more than one school had the same value for the item being studied an average of the comparative factors for these schools was used. As an example for this procedure: There were four schools which had two teachers, the costs per-pupil for these schools were added and the total divided by four in order to determine the per-pupil cost for schools with two teachers.

The data for the rural high schools are listed in Table XIX.

TABLE XIX

RURAL HIGH SCHOOLS WITH
8-4 ORGANIZATION

School	Valuation in thousands	Operating expense	Number of teachers	Enroll- ment	Cost per pupil per month
Abbyville	\$ 1,856	\$ 6,388	4	42	\$ 16.90
Admire	1,511	5,315	4	65	10.43
Almena	2,225	11,385	6	112	11.30
Andale	1,666	8,864	6	75	13.13
Arlington	2,748	10,620	6	83	14.22
Athol	1,126	5,208	4	55	10.52
Bancroft	2,121	3,494	3	29	13.38
Bavaria	1,493	5,805	3	27	23.89
Belle Plaine	3,136	13,271	8	153	9.64
Bendona	2,135	4,653	3	22	23.39
Bison	1,369	6,799	5	85	8.88
Bogue	1,297	5,923	4	53	11.97
Bucyrus	1,467	4,595	4	40	12.77
Burdick	1,791	5,308	4	40	14.75
Byers	1,015	10,454	6	77	15.09
Cassoday	2,039	6,895	4	23	33.12
Cedar Point	1,597	6,579	4	51	14.33
Chautauqua	629	3,860	4	81	5.32
Cleburne	1,290	5,162	4	37	15.50
Coats	1,305	8,754	6	65	14.51
Corning	2,121	7,760	6	99	8.71
Culver	1,619	6,506	4	73	9.90
Deerfield	1,782	7,691	6	76	11.24
Densmore	925	4,095	3	31	14.68
Derrance	2,198	7,984	6	52	17.06
Dwight	1,670	7,013	5	88	8.85
Edgerton	1,534	6,269	4	60	12.72
Elk Falls	943	5,308	4	48	12.29
Esbridge	2,542	11,269	8	135	9.28
Fairview	1,798	9,381	6	130	6.02
Fellsburg	837	4,322	4	26	18.47
Garfield	2,366	8,368	6	81	11.48
Glasco	3,103	15,152	8	122	13.80
Gossel	1,868	6,071	6	122	5.53
Grainfield	1,199	6,999	5	51	15.25
Greensburg	3,565	16,976	11	211	8.93

TABLE XIX (continued)

School	Valuation in thousands	Operating expense	Number of teachers	Enroll- ment	Cost per pupil per month
Haddam	1,770	8,631	6	85	11.28
Hamilton	4,132	14,070	7	142	11.01
Harveyville	1,230	7,310	5	82	9.91
Haviland	1,987	11,667	6	126	10.28
Herndon	1,477	7,572	5	51	16.49
Holyrood	4,089	12,994	6	60	18.05
Hoyt	1,977	6,910	5	81	9.48
Huron	1,400	4,302	3	63	9.01
Ionia	1,074	4,211	4	44	10.64
Keats	1,206	5,049	4	59	14.38
Kipp	2,042	6,309	4	39	17.97
Lake City	1,379	4,539	3	51	16.27
Lansing	2,108	9,999	6	114	9.75
Leon	1,594	11,447	8	141	9.02
Leovilla	480	2,411	2	32	8.38
Linn	1,897	8,672	4	92	10.47
Longford	1,643	7,980	5	121	7.33
Louisburg	2,062	10,656	6	128	9.25
Maple Hill	2,043	6,513	4	67	10.80
Melvern	1,940	10,710	7	111	10.72
Michigan Valley	618	3,560	3	37	10.51
Miller	1,168	7,092	5	47	16.76
Montezuma	2,510	9,604	5	77	13.85
Morrowville	2,828	9,774	6	112	9.70
Narka	2,189	5,856	4	52	12.51
Norcatur	1,052	7,727	5	106	8.10
Olsburg	879	2,436	2	23	11.77
Oxford	3,366	19,707	12	195	11.23
Paradise	1,359	5,742	4	35	18.23
Parkerville	969	3,636	3	32	13.32
Paxico	1,557	7,087	5	91	8.62
Piedmont	1,447	6,022	4	45	14.87
Plevna	1,757	5,964	5	49	13.63
Powhattan	1,431	7,846	5	49	8.63

TABLE XIX (continued)

School	Valuation in thousands	Operating expense	Number of teachers	Enroll- ment	Cost per pupil per month
Quinter	2,212	13,545	9	155	9.71
Randolph	1,841	6,627	5	80	9.20
Raymond	2,549	9,169	5	52	19.59
Reserve	1,534	3,231	2	37	9.70
Robinson	2,170	8,331	6	98	9.45
Rossville	3,231	11,346	7	97	12.99
St. Marys	1,880	8,298	6	102	9.04
Seaman	3,430	31,757	15	319	11.06
Severance	1,444	5,238	3	56	10.39
Shawnee Mission	12,912	65,702	26	748	9.75
Sinclair	1,094	5,743	4	61	10.48
South Haven	3,485	15,570	9	159	10.88
Stilwell	1,737	6,175	4	40	17.15
Strawn	677	5,564	4	43	14.38
Sun City	965	8,118	4	40	22.55
Tescott	1,734	6,471	4	62	11.59
Tonovay	1,003	3,457	3	41	9.37
Turon	1,987	7,087	5	95	8.29
Vernon	577	4,570	2	21	24.18
Virgil	1,472	8,657	5	53	18.15
Wamego	4,717	19,456	11	250	8.64
Wathena	2,407	11,933	8	150	9.23
Welda	2,134	6,332	4	59	11.93
Wetmore	1,804	5,868	6	79	8.25
Wilburton	525	2,448	3	18	15.11
Wilsey	1,727	6,769	5	76	9.89
Woodston	1,554	10,483	6	96	12.26
Zook	1,979	7,252	5	61	13.21

Read table thus: Abbeyville had a valuation of \$1,856,000. The operating expense was \$13,545. There were 4 teachers and an enrollment of 42. The cost per pupil per month based on enrollment was \$9.71. Read in like manner for other cities in this classification.

The Ranges in Rural High Schools

Even with the state law requiring at least two million dollars valuation before a rural high school district may be organized, the lowest valuation in this list was \$480,000. There are two factors either of which may account for this low valuation. The district may have been organized before 1917 when the two million dollar minimum valuation requirement was passed by the legislature, or the valuation of the district may have decreased since it was organized. This district is Leoville. The highest valuation was \$12,912,000 for Shawnee Mission. The cost per-pupil for the Leoville school was \$8.38 per-month. Shawnee Mission had an operating expense of \$9.75 per-pupil per-month. The per-pupil expenses for each of these districts is well below the median of \$11.71 for the rural high schools studied.

The lowest operating expense was \$2,411 for Leoville. Shawnee Mission was highest with \$65,702 operating expenses for the year 1936. A comparison of the per-pupil costs for these schools was made in the above paragraph.

Again in the number of teachers in the school system Shawnee Mission ranked highest with twenty-six teachers. Leoville, Olsburg, Reserve, and Vernon each had two teachers. In these four schools there was a range from \$8.38 per-pupil per-month to \$24.18. The average per-pupil expense for these four schools being \$15.51 per month. Again, these figures indicate that on a basis of per-pupil cost, two teacher high schools are not efficient.

Shawnee Mission had an enrollment of 748 pupils which was approximately one-tenth of the total enrollment for this list of one hundred rural high schools. The teacher-pupil ratio for Shawnee Mission was twenty-nine to one. Vernon which had two teachers and twenty-one pupils was lowest in this item. The teacher pupil ratio for Vernon was eleven to one. The per-pupil cost for Shawnee Mission was \$9.75 per-month while Vernon had a per-pupil cost of \$24.18 per-month. Again this indicates that small two teacher schools are expensive schools.

Chautauqua had the lowest per-pupil valuation for this group of rural high schools. The valuation per-pupil enrolled in Chautauqua was \$7.760. The highest valuation per-pupil was \$97,040 which was the valuation back of each pupil in the Bendena Rural High School. Bendena had a teacher-pupil ratio of seven to one and a per-pupil cost of \$23.39 per-month. Chautauqua had a teacher-pupil ratio of twenty to one and a per-pupil expense of \$5.32 per-month. These figures indicate the schools with the largest valuation per-pupil and the lowest teacher pupil ratio have the highest cost per-pupil per-month.

There was a range in the per-pupil costs for the rural high schools from \$5.32 per month for Chautauqua to \$33.12 per-pupil per-month in the Cassoday district. The lowest expense of \$5.32 for Chautauqua is only twenty-one cents per-month lower than the next higher ranking school for this item. Cassoday with a per-pupil expense of \$33.12 per-month spends \$8.94 more per-pupil than Vernon which is the next lower ranking school

for this measure. Cassoday had an enrollment of twenty-three pupils and employed four teachers. This would make a teacher-pupil ratio of approximately six to one for Cassoday. Vernon is a small school also. The enrollment for 1936 was twenty-one and there were two teachers employed. Chautauque which was lowest in per-pupil cost had eighty-one pupils enrolled and employed four teachers.

A complete tabulation of the ranges for the rural high schools studied is recorded in Table XX.

TABLE XX

A COMPARISON OF THE HIGHEST, MEDIAN, AND LOWEST VALUATION,
OPERATING EXPENSE, NUMBER OF TEACHERS, ENROLLMENT,
PER-PUPIL VALUATION, AND THE PER PUPIL PER MONTH
COST OF OPERATION IN ONE HUNDRED RURAL HIGH
SCHOOLS OF KANSAS

Item	Lowest	Median	Highest
Valuation	\$480,000	\$1,721,700	\$12,912,000
Operating expense	\$2,411	\$6,940	\$65,702
Number of teachers	2	5.31	26
Enrollment	21	86	748
Per-pupil valuation	\$7,760	\$22,640(Av.)	\$97,040
Cost per-pupil	\$5.32	\$11.71	\$33.12

Read table thus: In the rural high schools the lowest valuation was \$480,000. The median valuation was \$1,721,000. The highest valuation was \$12,912,000. Read in like manner for other items in this table.

A Typical Rural High School

A typical rural high school would be located in one of the small third class cities of Kansas. The high school building would be the largest of the newer public buildings in the town.

The large area included in the rural high school district would have an assessed valuation of \$1,721,700. This valuation would be taxed to raise \$6,940 to be used for the operating expenses of the school.

This rural high school would have an enrollment of eighty-six pupils. These pupils would come from homes which had mutual interests, mainly agriculture. The school would be directed by a principal and four teachers. The principal would be classed as a teacher because he would be teaching a full load in addition to his duties as principal. The teacher pupil ratio of this school would be seventeen to one. Each teacher would have a chance to become personally acquainted with every member of the student body.

In this typical rural high school there would be an assessed valuation of \$22,640 back of each pupil enrolled. From this assessed valuation this school would raise the \$11.71 per-pupil per-month for operating expenses.

A statistical summary for this typical rural high school is expressed in Table XXI.

TABLE XXI

A TYPICAL RURAL HIGH SCHOOL BASED ON THE MEDIAN FIGURES FOR VALUATION, OPERATING EXPENSE, ENROLLMENT, NUMBER OF TEACHERS, PER-PUPIL VALUATION, AND THE PER PUPIL EXPENSE OF OPERATION OF THE ONE HUNDRED RURAL HIGH SCHOOLS STUDIED

Item	Median
Valuation	\$1,721,700
Operating expense	\$6,940
Number of teachers	5.3
Enrollment	86
Per-pupil assessed valuation	\$22,640 (Av.)
Cost per-pupil	\$11.71

Read table thus: In the typical rural high school the valuation in 1936 was \$1,721,700. Read in like manner for other items in this table.

Summary of Chapter VI

In this study of the rural high schools the following facts and trends were noted.

1. The rural high school organization is the most popular type in Kansas.
2. The median valuation of these districts is lower than the minimum standard set by law.
3. The cost of operation per-pupil per-month is higher for this type of school than for other schools studied thus far.
4. The small two teacher schools cost more per-pupil than the larger schools.
5. There is a direct relationship indicated between the valuation per-pupil and the cost of operation on a per-pupil basis.

CHAPTER VII

CITY VILLAGE SCHOOLS

The city village school district is the oldest type of district organization used by the schools of Kansas. This type of organization was started in the early Massachusetts colonial towns which organized a school to serve the people of the village. A new district would be organized for each settlement as the demand for a school was made.

This type of school was marked by its democracy in that the people had complete control of the school even to the subjects to be taught. To be elected to the school board was and still is considered as being a high honor in the community.

In recent years the control of the school has been partly removed from the local board of education and placed in the hands of a state superintendent. This centralized control of education has tended to increase the standards and efficiency of the public schools.

Kansas has more than 260 third class city school districts organized as city village schools (C.V.S.). From an alphabetized list of these schools every second school with the 8-4 type of organization was selected for this study. Data concerning the valuation, operating expense, number of teachers employed, the number of pupils enrolled, the assessed valuation per-pupil, and the cost of operation per-pupil per-month for the year 1936 were gathered for each school. The figures for these items are compiled in Table XXII which follows.

TABLE XXII
CITY VILLAGE HIGH SCHOOLS WITH
8-4 ORGANIZATION

School	Valuation in thousands	Operating expense	Number of teachers	Enroll- ment	Cost per pupil per month
Alden	\$ 1,219	\$ 8,074	6	82	\$ 10.94
Alta Vista	590	6,312	5	115	6.10
Andover	899	6,723	5	53	14.09
Arcadia	410	7,415	6	145	5.68
Ashland	1,779	15,899	11	194	9.10
Axtell	813	8,678	7	121	7.97
Beattie	712	5,222	4	45	12.89
Bennington	710	6,347	4	75	9.40
Bern	442	3,790	3	50	8.42
Blue Rapids	1,360	13,524	10	180	8.35
Bucklin	1,260	11,191	8	111	11.20
Burlingame	992	11,505	8	144	8.87
Burrton	1,184	7,906	6	132	6.65
Cawker City	778	8,824	6	91	10.78
Centralia	937	8,013	5	123	7.06
Cimarron	2,290	14,180	6	103	8.04
Clearwater	1,266	9,524	7	138	7.66
Clyde	1,243	10,920	7	149	8.14
Cokerill	276	5,123	4	132	4.31
Collyer	671	4,161	3	41	11.27
Conway Springs	767	6,840	7	111	6.85
Cuba	670	4,985	4	64	8.66
Delphos	1,175	9,516	7	90	11.74
Dexter	650	7,852	5	67	13.02
Downs	1,478	11,433	9	137	9.27
Durham	933	7,721	5	66	12.99
Edwardsville	495	4,972	4	53	10.42
Elkhart	1,116	7,570	7	129	6.52
Elmore	335	3,712	3	38	11.85
Enterprise	1,109	7,453	5	78	10.61
Esbon	469	6,169	5	75	9.14
Fulton	286	8,079	5	111	8.04
Galesburg	282	3,526	3	46	8.51
Galva	1,225	6,072	5	71	9.50
Gardener	1,213	8,307	6	111	8.32

TABLE XXII (continued)

School	Valuation in thousands	Operating expense	Number of teachers	Enroll- ment	Cost per pupil per month
Gen	650	5,525	4	26	23.61
Geneva	207	1,926	2	8	26.74
Goddard	1,081	7,394	5	50	16.43
Greenleaf	963	5,717	5	76	8.36
Gypsum City	924	10,508	7	125	9.34
Hanover	1,127	7,393	6	92	8.93
Havana	528	4,308	3	51	9.38
Highland Park	1,373	18,577	12	284	7.27
Hollenberg	345	2,408	3	36	7.43
Hudson	657	7,717	3	43	8.49
Isabel	1,151	6,489	4	77	9.35
Jennings	954	4,900	4	54	10.08
Kanopolis	898	8,685	5	79	12.22
Kiowa	1,717	17,240	11	249	7.69
LaCygne	735	7,068	8	124	8.12
Lane	513	6,024	4	53	12.63
Lebo	894	7,976	6	97	9.13
Leroy	684	8,831	7	114	8.61
Liberty	316	2,072	2	52	4.42
Little River	1,147	8,140	6	100	9.04
Logan	801	6,865	5	103	7.33
Longton	529	7,348	5	77	10.60
Luray	704	9,794	6	81	13.44
Mecksville	1,112	5,235	7	101	13.84
Mankato	1,622	10,596	8	143	8.23
McCracken	763	5,318	4	76	7.78
Midian	757	8,289	6	49	18.80
Mildred	526	4,476	4	47	10.57
Monument	806	6,519	4	45	16.09
Morganville	522	3,761	4	53	7.88
Mound City	502	11,494	3	151	8.45
Mound Valley	691	5,039	4	54	13.06
Munden	525	2,578	4	29	9.88
Natoma	1,161	7,163	4	73	10.90
Ness City	1,122	11,197	9	178	6.98

TABLE XXII (continued)

School	Valuation in thousands	Operating expense	Number of teachers	Enroll- ment	Cost per pupil per month
Oketo	497	3,108	6	33	10.46
Peabody	2,172	15,301	11	188	9.04
Peru	415	5,641	4	82	7.64
Pleasanton	949	13,634	8	195	7.76
Potwin	837	4,977	4	65	8.51
Princeton	600	4,901	4	61	8.43
Quenemo	532	4,915	5	55	9.93
Republic	530	6,000	9	66	8.82
Richfield	521	3,028	2	29	11.60
Rosalia	731	6,512	7	51	14.19
Russell Springs	346	6,490	5	52	13.87
St. Paul	317	2,682	2	43	6.93
Scandia	864	8,844	6	92	10.68
Seranton	509	5,210	4	51	11.35
Sedwick	1,427	9,858	7	84	13.04
Smith Center	1,867	19,597	14	249	8.90
Spearville	1,024	11,098	8	98	12.57
Summerfield	456	6,110	4	70	8.73
Sylvan Grove	899	7,410	6	79	10.40
Turner	3,677	16,177	8	168	10.70
Udall	532	6,181	5	75	9.15
Valley Center	1,644	7,807	9	185	9.97
Vermillion	519	5,436	4	70	8.63
Viola	1,081	4,655	4	33	15.67
Walnut	480	5,652	5	74	8.48
Washington	1,693	15,299	9	145	11.72
Webber	337	3,423	3	49	7.76
Wheaton	335	2,496	2	34	8.16
Wilson	1,634	12,341	8	123	11.15
Woodruff	309	2,358	2	20	15.10

Read table thus: Alden had a valuation of \$1,219,000 in 1936. The operating expenses were \$3,108. There were 6 teachers and 82 pupils. The cost per-pupil per-month based on enrollment was \$10.46. Read for other cities in this table in like manner.

Ranges for City Village Schools

The C.V.S. districts are in many cases very small and have a low valuation. In many of these districts a large part of the expenses of the school are paid with money received as tuition from students attending the school from outside of the district.

The lowest valuation for a school of the city village type was \$207,000 which was the assessed valuation for the school district at Geneva. The highest valuation in 1936 was \$8,677,000 which was the valuation for the Turner district. Geneva is a very small school and had a per-pupil cost of \$26.74 per-month. Turner had an operating expense of \$10.70 per-pupil per-month. These figures continue to substantiate the statement made in a previous chapter that the very small schools are the most expensive to operate when a per-pupil cost is used as a base for comparison.

There were six of these city village schools which had only two teachers. In these two-teacher schools the range in cost per-pupil was from \$4.42 to \$26.74 per month. The average per-pupil cost for these schools was \$11.82 per-month. The greatest number of teachers in any school in this group was fourteen, which was the number employed by Smith Center. The per-pupil cost in Smith Center was \$8.90 per month.

Highland Park which had 284 pupils enrolled in 1936 had the highest enrollment. Geneva with only eight pupils was lowest in this measure. The per-pupil cost for Geneva was \$26.74 while Highland Park

had an operating expense of \$7.27 per-pupil per-month for the same year. This is to be expected as teachers salary is the single largest expense of operation item, and it tends to be proportionately high when enrollment is very low.

The highest valuation per-pupil was \$25,875 which was the assessed valuation back of each pupil in the Geneva school. This offers sustaining evidence that Geneva can afford to operate her small enrollment school if by so doing she serves her constituency better. Geneva had only eight pupils and two teachers. The teacher pupil ratio being four to one and the cost per-pupil \$26.74 per-month. Cockerill had a per-pupil valuation of \$2,090 for 1936. The per-pupil per-month expense of this school was \$4.31. Cockerill had 132 pupils enrolled and employed four teachers. The teacher pupil ratio for this school was thirty-three to one. The district with the most money back of each pupil usually spends the greatest amount per-pupil per-month, this has been shown in all of the schools studied in this research. The small school with a low teacher pupil ratio is the most expensive to operate, but usually can afford the high operation costs.

There was a range from \$4.31 per-pupil per-month which was the operating expense for Cockerill to \$26.74 per-month which was the per-pupil expense for Geneva. The low of \$4.31 is only eleven cents per-pupil lower than the next higher ranking school in the cost of operation per-pupil per-month.

A statistical summary for these ranges is shown in Table XXIII.

TABLE XXIII

THE HIGHEST, MEDIAN, AND LOWEST VALUATION, OPERATING EXPENSE,
NUMBER OF TEACHERS, ENROLLMENT, PER PUPIL VALUATION,
AND THE PER-PUPIL PER-MONTH COST OF OPERATION FOR
ONE HUNDRED CITY VILLAGE SCHOOLS FROM THE
THIRD CLASS CITIES OF KANSAS

Item	Lowest	Median	Highest
Valuation	\$207,000	\$786,600	\$3,677,000
Operating expense	\$1,926	\$7,180	\$19,597
Number of teachers	2	6.49	14
Enrollment	8	78	284
Per-pupil valuation	\$2,090	\$9,400	\$26,875
Cost per-pupil	\$4.31	\$9.49	\$26.74

Read table thus: In the C.V.S. districts the lowest valuation in 1936 was \$207,000. The median valuation was \$786,600 and the highest valuation was \$3,677,000. Read in like manner for other items in this table.

A Typical Third Class City Village School

The typical city village school in Kansas would be located in one of the small third class cities. There are more than two hundred and fifty of these small districts in the State. The valuation of this typical district would be \$786,000. The district would be expected to raise \$7,180 by taxation for the operating expenses of the school. This district would receive some money for tuition from students which attend from outside of the district.

The variation in such "tuition" money would vary widely from none at all to possibly 50% of the total operating expense.

This typical high school would have an enrollment of seventy-eight pupils and would employ six teachers. The teacher-pupil ratio of this school would be thirteen to one. The teachers and the pupils would have an opportunity to have a personal acquaintance.

Supporting each pupil in this typical school would be an assessed valuation of \$9,400. From this valuation the district would spend \$9.49 for each pupil each month which would be the cost of operation.

The measure of central tendency used in Table XXIV is the median for each item studied in this research of one hundred selected schools organized under the City Village School plan.

TABLE XXIV

A TYPICAL THIRD CLASS CITY VILLAGE SCHOOL BASED ON THE
 MEDIAN FIGURES FOR VALUATION, OPERATING EXPENSE,
 ENROLLMENT, NUMBER OF TEACHERS, PER-PUPIL
 VALUATION, AND THE PER-PUPIL, PER-MONTH
 EXPENSE FOR OPERATION OF THE ONE
 HUNDRED C.V.S DISTRICTS STUDIED

Item	Median
Valuation	\$786,600
Operating expense	\$7,180
Number of teachers	6.29
Enrollment	78
Per pupil valuation	\$9,400
Cost per pupil	\$9.49

Read table thus: The median valuation for C.V.S. districts in the third class cities was \$786,600 in 1936. Read in like manner for other items in this table.

Summary of Chapter VII

In the comparisons made of the small city village school there have been some general trends noted.

1. The schools with an enrollment of less than one hundred had a higher per-pupil cost than those schools with a larger enrollment.
2. The assessed valuation of the district per-pupil and the cost per-pupil for operation vary in direct relationship.
3. The number of teachers does not serve as a reliable indicator of per-pupil cost.
4. The very small schools are most expensive to operate but frequently are financially able to spend rather exorbitantly for schooling.

CHAPTER VIII

COMPARISONS FOR THE HIGH SCHOOLS OF KANSAS ON A PER-PUPIL EXPENSE BASIS

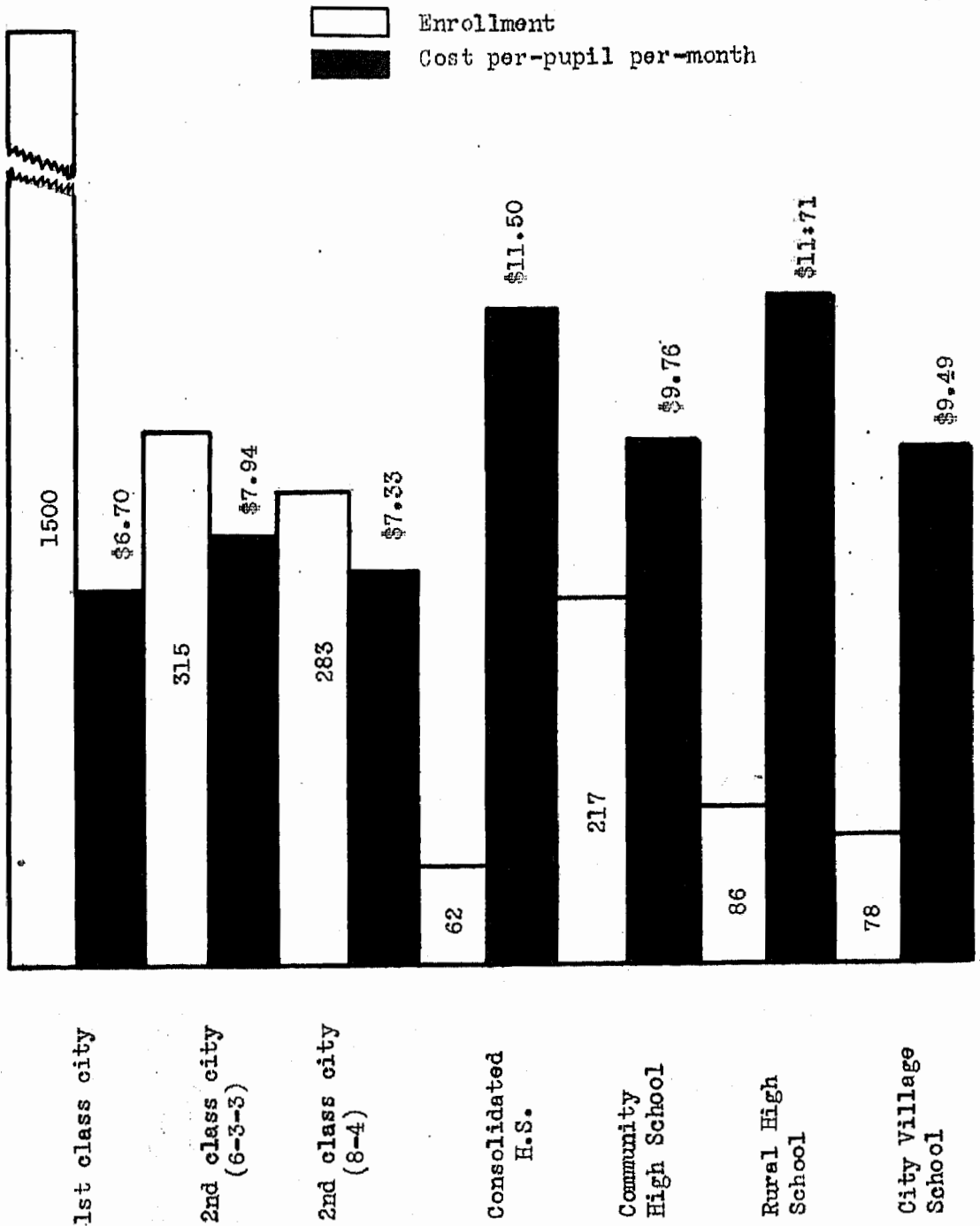
In the previous chapters the valuation, number of teachers, enrollment, valuation per-pupil, operating expense, and the cost per-pupil per-month have been studied for each of the seven types of high schools in Kansas. The highest, median, and lowest figures for each of the above items have been presented in the tables of the previous chapters. From this material certain comparisons have been made.

Figure 1 is a comparison of the median enrollment of each type of school and the cost per-pupil for the school having this enrollment. In case there were more than one school having the median number of pupils enrolled the average per-pupil cost for these schools was used for this comparison.

From Figure 1 it will be noted that there is no definite relationship shown between the enrollment of the schools and the cost of operation per-pupil.

The first class cities had the largest enrollment and the lowest per-pupil cost. The highest per-pupil cost was in the rural high schools. In the rural high schools there is frequently the cost of pupil transportation which is a major item of expense. The larger schools in the first class cities are operating nearer to their capacity than are the smaller rural schools, this might be a factor which would account for the lower per-pupil cost in the first class cities.

There is a much greater variation in the enrollment of these schools than there is in the per-pupil costs of operation. The enrollment varies from sixty-two to 1,500 while the median per-pupil costs vary from \$6.70 to \$11.71 per-month.



Read figure thus: In the First Class City Schools the median enrollment was 1500 and the median cost per-pupil was \$6.70.

FIGURE 1

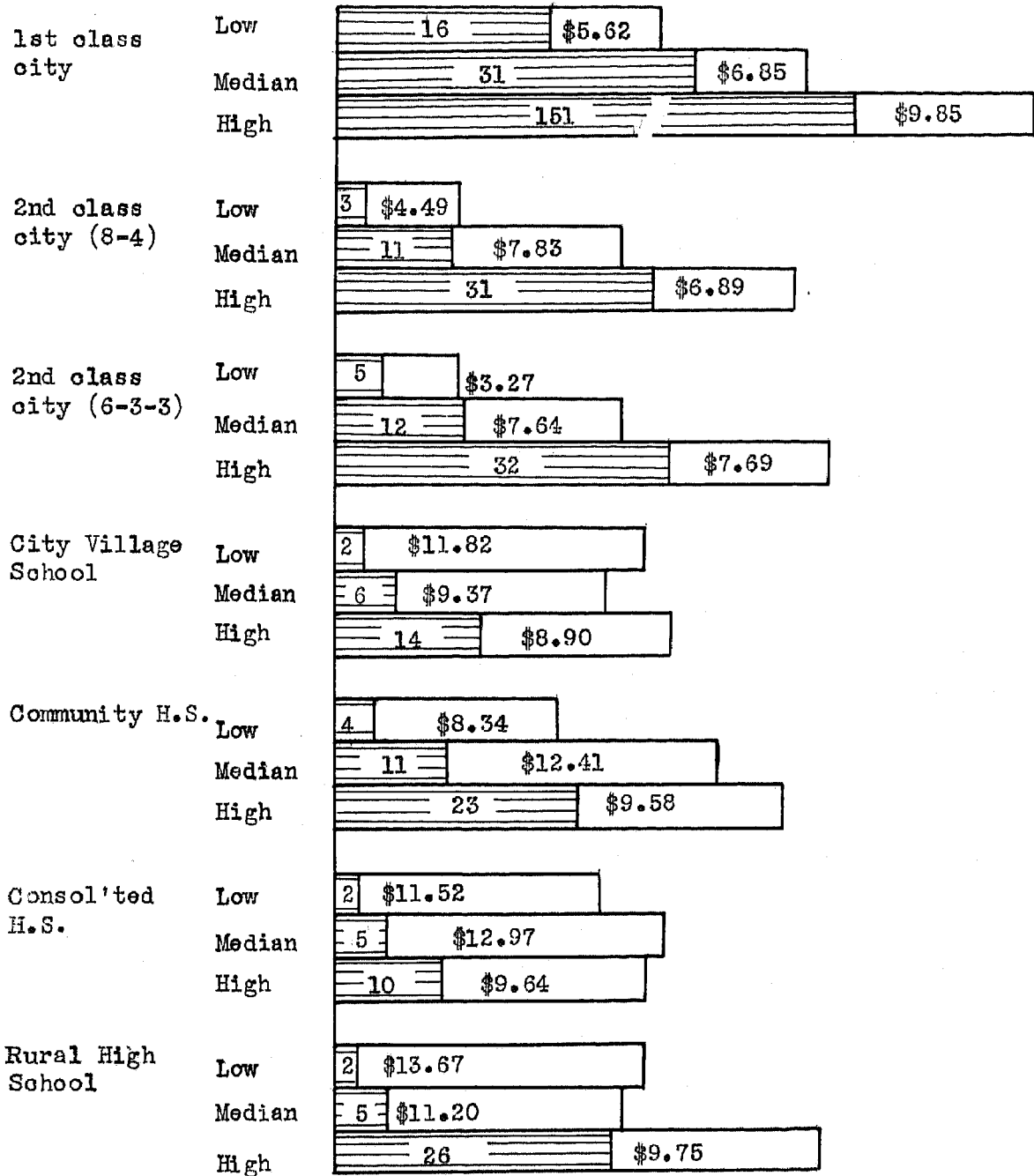
THE MEDIAN ENROLLMENT AND THE MEDIAN COST PER-PUPIL PER-MONTH FOR THE DIFFERENT TYPES OF HIGH SCHOOLS

The number of teachers in the high schools of Kansas vary from two to 151. There are several of the small schools which employ only two teachers. Wichita high schools have the largest faculties of Kansas high schools.

Figure 2 is a comparison of the number of teachers with the cost per-pupil per-month for the various types of high schools. From each type of school organization the schools which had the lowest, median, and highest number of teachers were selected. The costs per-pupil for each of the representative schools were used as the comparative factors. When more than one school had the same number of teachers an average of the per-pupil costs were used to represent this group.

The first class cities, and the second class cities which had the 6-3-3 organization, were the only schools to show that the cost per-pupil increased with an increase in the number of teachers. This is not shown in any of the other schools. There is no constant relationship between the number of teachers and the cost per-pupil in these schools.

This Figure would indicate that the number of teachers alone would not be a reliable factor to use for determining the cost per-pupil.



Read figure thus: For the Rural High Schools the least number of teachers was two and the cost per pupil for this school was \$13.67. Read in like manner for median and highest measures.

FIGURE 2

THE NUMBER OF TEACHERS AND THE COST PER-PUPIL PER-MONTH

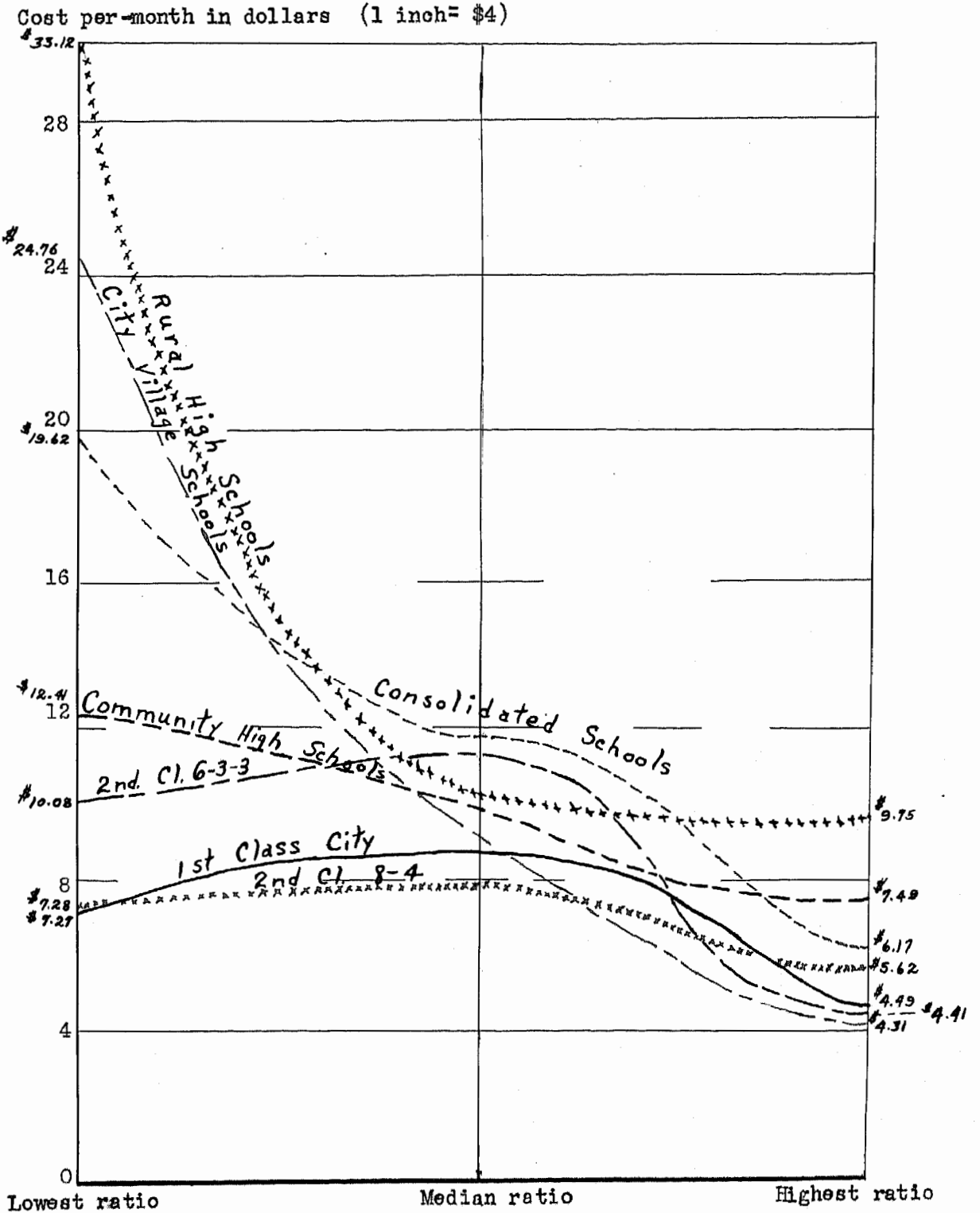
In the comparisons made thus far no direct correlations have been found. Figure 3 is a comparison between the teacher-pupil ratio and the cost of operation on a per-pupil basis.

There is a variation in the teacher pupil ratio for the schools of Kansas from four to one in one of the small two-teacher schools to forty-four to one in another small school. The average ratio in the larger schools was approximately thirty to one.

The rural high school (R.H.S.) with the lowest teacher pupil ratio had the highest per-pupil cost of any of the representative schools. In the city village school (C.V.S.) with the highest teacher-pupil ratio the lowest cost per-pupil was found. This same inverse relationship was indicated by all of the representative groups except the second class cities with the 6-3-3 organization.

In the first and second class cities, the schools with the median teacher-pupil ratio had a higher per-pupil cost than either the schools with the lowest teacher-pupil ratio, or the highest teacher-pupil ratio. In the other representative groups the cost for the school with the median teacher-pupil ratio fell between the highest and the lowest.

This Figure would indicate that there is an inverse relationship between the teacher-pupil ratio and the cost per-pupil in the schools of Kansas.



Read figure thus: In the First Class City high schools the school with the lowest teacher-pupil ratio had a per pupil cost of \$7.27. The school with the median ratio had a cost of \$8.46. The school with the lowest ratio had a cost of \$4.49.

FIGURE 3
THE TEACHER-PUPIL RATIO AND THE OPERATING COST PER-PUPIL PER-MONTH

The measure which most nearly indicates the ability of a district to support a school is the valuation per pupil. In Figure 4 a comparison is made of the median assessed valuations per-pupil in the different types of schools.

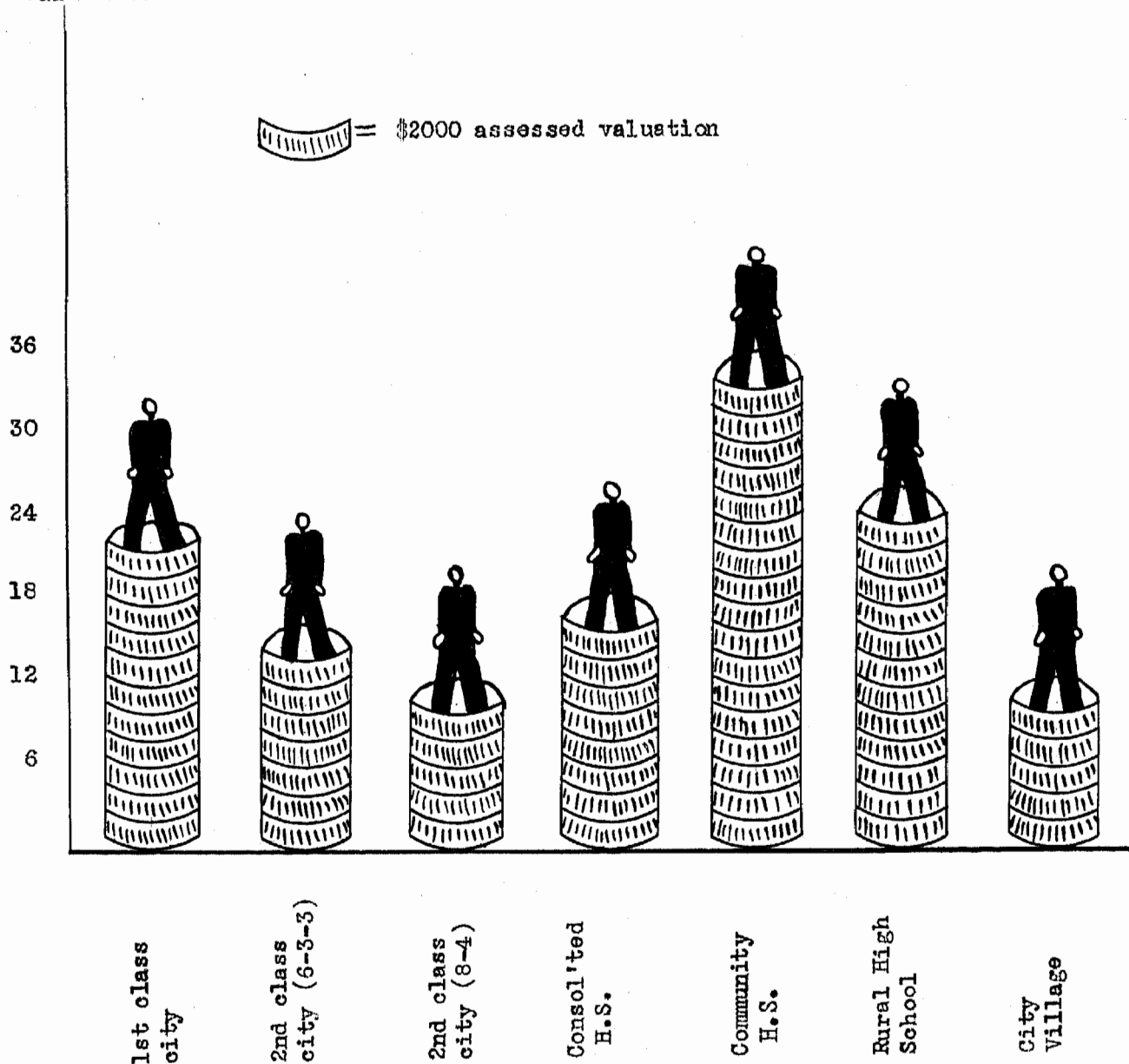
The community high schools had the largest assessed valuation back of each pupil. These districts are very large and the school population is comparatively low. Much of the community high school district is open farm or pasture land.

The rural high schools also have a large per-pupil valuation. These are large districts and are not thickly populated. The concentrated wealth of the first class city districts gives them a high assessed per-pupil valuation.

The lowest per-pupil valuation was found in the city village schools. These are small districts which usually do not have any large industry to increase the valuation.

A wide variation in the assessed valuation does not necessarily indicate there is such a great difference in the schools. It does indicate that the ability to support the school is not equal in all districts and that there should be some equalization plan for the high schools of the state.

Valuation in thousands of dollars



Read figure thus: In the first class city schools there was a median assessed valuation of \$22,000 supporting each pupil enrolled in the high school.

FIGURE 4

THE MEDIAN ASSESSED VALUATION PER-PUPIL IN THE
HIGH SCHOOLS OF KANSAS

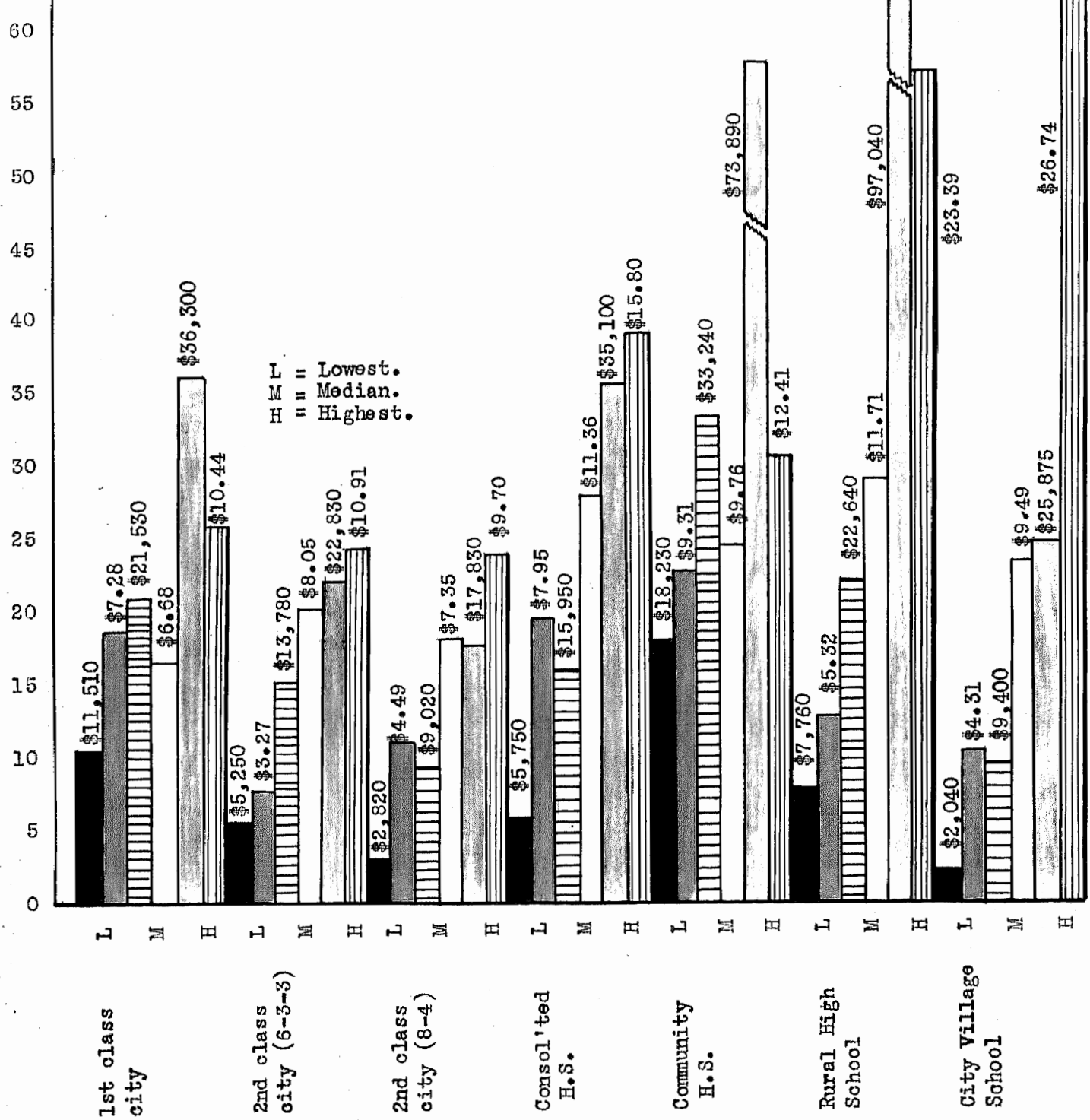
The ability that a district has to support a school should determine to a certain extent the amount spent by that district for its school. The assessed valuation per-pupil is the ability of a district to support a school. In Figure 5 the schools in each type of organization with the highest, lowest, and median valuations and their respective per-pupil expenses have been compared.

In the first class cities the school with the lowest valuation per-pupil spent more than the school with the median valuation. The school with the highest valuation per-pupil spent the most per-pupil in all types of organizations.

With the exception of the above mentioned case the cost per-pupil increased with the increase in the assessed valuation back of each pupil. This is as it should be in the schools.

There is no direct ratio between the increase in the assessed valuation per-pupil and the increase in the amount spent per-pupil in the districts. It is significant that the districts are spending more to support schools when the money is available.

Valuation in thousands



Read figure thus: In the First Class City High Schools the lowest valuation per-pupil was \$11,510 and the cost of operation in this school was \$7.28. Read in like manner for the median and highest measures, and for other schools in this figure.

FIGURE 5

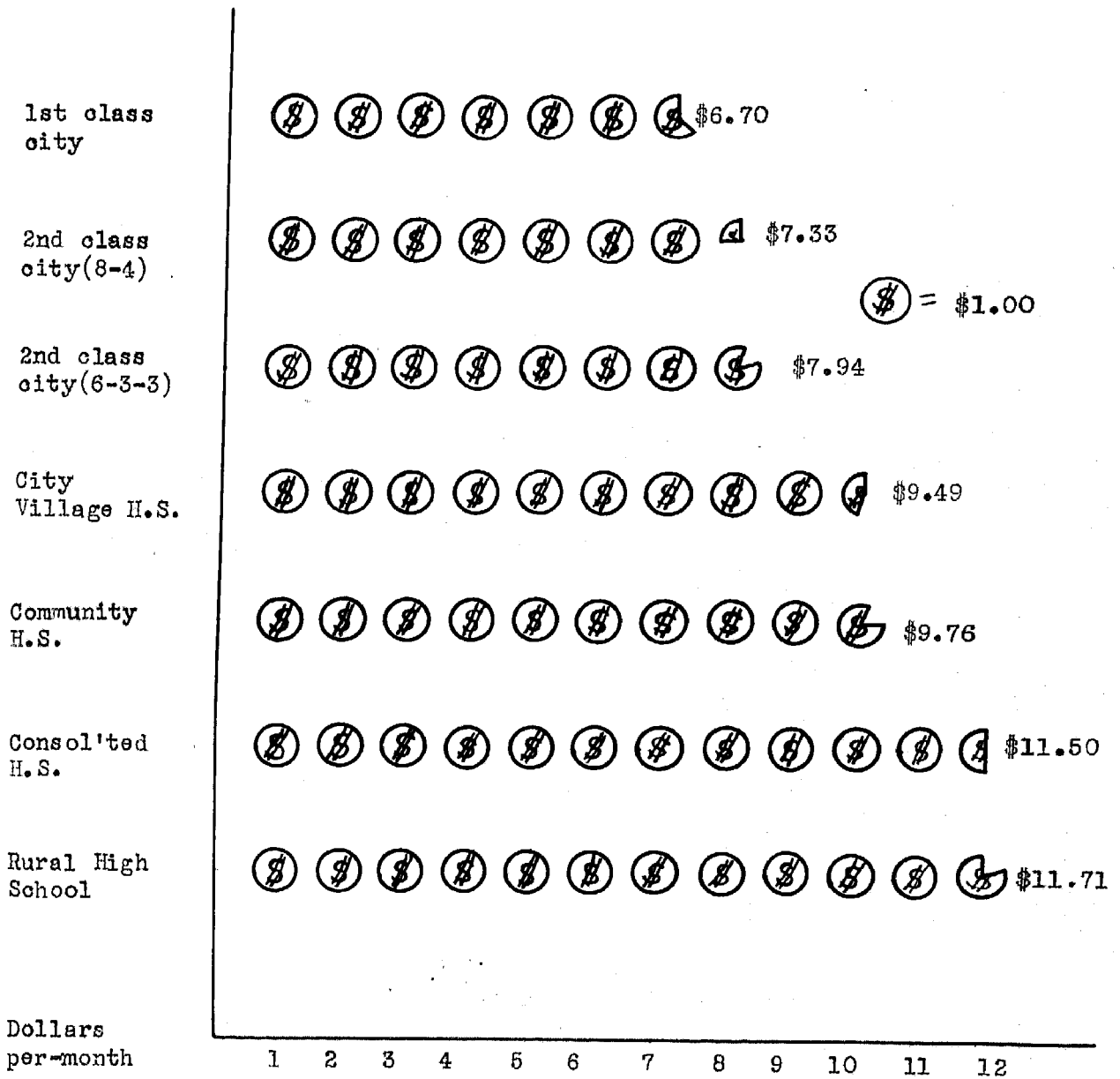
THE VALUATION PER-PUPIL AND THE COST OF OPERATION PER-PUPIL PER MONTH

In this study the cost of operation of the school on a per-pupil per-month basis was the factor to be used in comparing the efficiency of the different types of high school organizations in Kansas.

In the previous figures in this chapter the per-pupil cost has been compared with the number of teachers, enrollment, teacher-pupil ratio, and assessed valuation per-pupil. Figure 6 is a comparison of the median per-pupil costs of operation in the different types of high school organizations.

The first class cities had the lowest median per-pupil cost. These large cities have modern school plants and have a large building load which makes the cost of operation lower than in schools with a poor building and a light load. The average teacher-pupil ratio was higher in the first class cities than in any of the other schools. The equipment and the staff of the large city schools is the most efficient that is found in the Kansas schools. These are some of the factors which may contribute to the efficiency of the first class city schools.

The rural high schools had the highest per-pupil expense. These rural high schools are comparatively small and have a high valuation back of each pupil. In these high schools the principal is commonly the only executive in the school and may be untrained in school purchasing. Much of the purchasing is done by a board of education which know very little about school materials. These are some of the factors which may account for the high per-pupil cost of operation in this type of school.



Read figure thus: In the Rural High Schools the average cost of operation was \$11.71 per-pupil per-month. Read in like manner for schools in this figure.

FIGURE 6

THE AVERAGE COST PER-PUPIL PER-MONTH FOR OPERATION OF THE DIFFERENT TYPES OF HIGH SCHOOLS

In this study of the cost of operation on a per-pupil basis several trends have been noted.

1. The number of teachers alone is not a reliable indicator of per-pupil costs.
2. There is no definite relationship between the enrollment and the cost per-pupil.
3. The very small schools spend more per-pupil but have the ability to raise this amount.
4. There is an inverse relationship between the teacher pupil ratio and the cost per-pupil.
5. The large city schools are more efficient than the smaller village and rural schools when a per-pupil cost basis is used for comparison.
6. The assessed valuation back of each pupil and the cost per-pupil per-month vary directly with each other.

BIBLIOGRAPHY

- Althaus, Carl B., "Trends of School Taxes in Kansas" Elementary School Journal, September, 1930. Vol. 31. pp. 13-15.
- Black, C., "Then and Now in School Finance" American School Board Journal, January, 1928. Vol. 76. 101 pp.
- Blose, David T., and Deffenbaugh, W. S., "Statistics of State School Systems, 1933-34." Biennial Survey of Education in the United States: 1932-34. U. S. Dept. of the Interior, Office of Education, Bulletin, 1935, No. 2. Washington, D. C.: Government Printing Office, 1937. 111 pp.
- Burgess, W. Randolph, Trends of School Costs, Department of Education Russell Sage Foundation, 1920. 142 pp.
- Comstock, Lula Mae, Per Capita Costs in City Schools, 1935-36. U. S. Dept. of the Interior, Office of Education, Pamphlet No. 70. Washington, D. C.: Government Printing Office, 1937. 23 pp.
- Comstock, Lula Mae, Per Capita Costs in City Schools, 1932-1933. U. S. Dept. of the Interior, Office of Education, Circular No. 125. Washington, D. C.: January, 1934. 10 pp.
- Cornell, Francis G., "Comparing Costs for High School and Elementary School." American School Board Journal, September, 1934. Vol. 89. pp. 24-25, 74.
- Davis, H. H., "Index of School Plant Operation Costs." American School Board Journal, July, 1926. Vol. 73. 53 pp.
- Davis, H. H., "Proportion of Public Expenditures Devoted to Teachers' Salaries." Educational Research Bulletin, November 23, 1932. Vol. 11. pp. 893-95.
- Gaumnitz, Walter H., "Small Schools--Large Costs." School Life, June, 1935. Vol. 20. pp. 232-33.
- Herlihy, Lester B., "Urban and Rural School Expenditures." School Life, June, 1936. Vol. 21. 272 pp.
- Krueger, R. L., "A Comparison Between School Attendance and School Costs." Journal of Educational Research, April, 1928. Vol. 17. pp. 273-77.
- Lowrey, Harvey H., "A Five-Year Study of Per Capita Costs in Fordson School District, Dearborn, Michigan." American School Board Journal, December, 1933. Vol. 87. 38 pp.

- Little, Kenneth J., A Critical Study of Public School Costs in Kansas from 1898 to 1928. Emporia: Kansas State Teachers College Press, 195 pp.
- Markham, W. T., Compiler: Revised School Laws of Kansas, Topeka: Kansas State Printing Plant, 1937, 290 pp.
- Markham, W. T., Thirtieth Biennial Report, Topeka: Kansas State Printing Plant, 1936, 421 pp.
- Markham, W. T., A Handbook of Organization and Practice for Secondary Schools, Topeka: Kansas State Printing Plant, 1937, 108 pp.
- Monroe, Walter Scott, The Cost of Instruction in Kansas High Schools. Topeka: Kansas State Printing Office, 1915. 35 pp.
- National Education Association, Research Division. "Facts on School Costs." Research Bulletin National Education Association, Washington, D. C. November, 1932. Vol. 10. pp. 203-26.
- Soper, Wayne W., Trends in Public School Costs in New York State. Albany, N. Y.: State Education Department, 1936. 62 pp.
- Strayer, George D., "Total and Per Capita Wealth, Income and Expenditures for Public Education by States." Proceedings of the National Education Association, 1924. 263 pp.